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THE  
**Vasculum**  
The North Country Quarterly  
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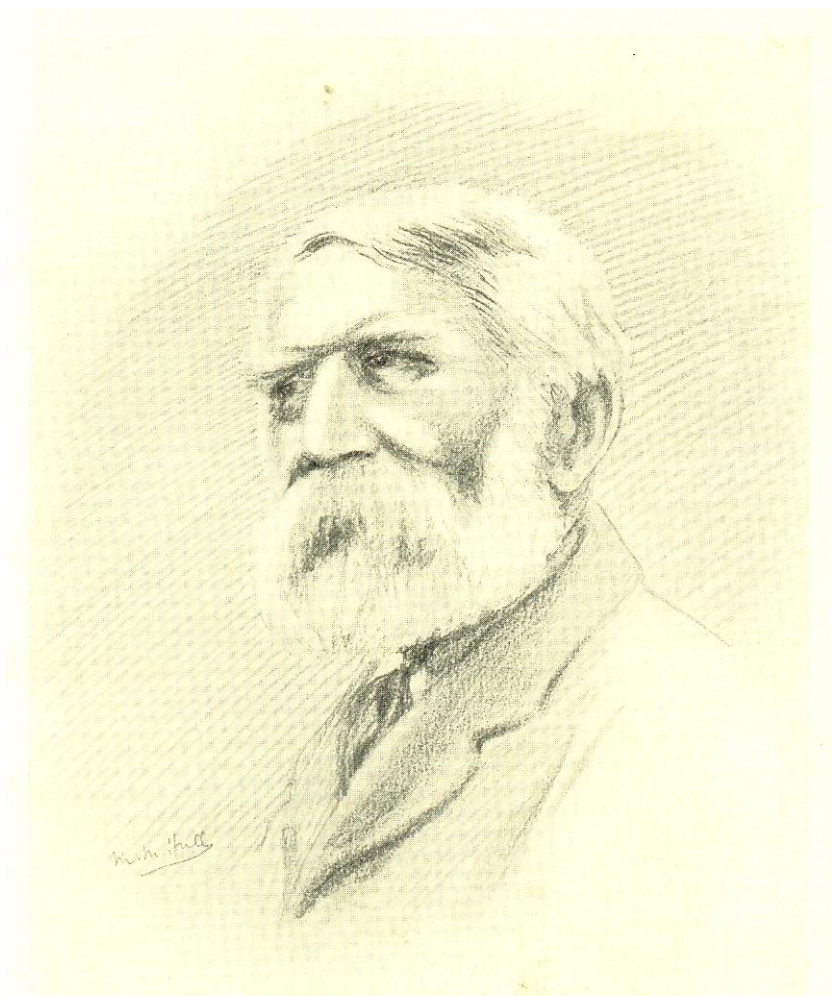
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TO LET.



George Bolam : 1859-1934.

# THE VASCULUM

Vol. XXI. No. 1.

February, 1935.

## GEORGE BOLAM: 1859-1934.

J. E. HULL.

Though George Bolam and I were in years and in the pursuit of Natural History almost precisely contemporaneous, it was not till 1912 that we came into intimate contact, when he settled at Alston and entered on the last phase of his life. The Berwickshire Naturalists' Club, which he joined in 1881, and my own society, the Northumberland and Durham Natural History Society, centred respectively at Berwick and Newcastle, were a whole county asunder and contacts were few, even though their areas overlapped. Wider still was the gap between our special enthusiasms; for while he moved habitually among the Vertebrates I was more or less engrossed with Lilliputian races in a far away province of the spineless, toiling with lens and microscope, things for which he had little or no use.

Thus, of his earlier life I can tell only what I have heard, chiefly from his own lips. He was born at Barmoor on the 8th November, 1859, but the home of his boyhood from 1864 onwards was Weetwood Hall. In due course he entered a preparatory school at Northallerton and from thence passed on to Uppingham school. In 1877 the family removed to Berwick and George was taken into his father's office to learn the business of a land agent.

Both at home and at Uppingham his natural bent was encouraged and fostered and he very soon became a competent field ornithologist. This brought him into touch with older and more experienced men of the same pursuit, among them (always a revered and cherished memory!) John Hancock. Another valued friend of these earlier years was James Hardy, Secretary of the Berwickshire Naturalists' Club, whose work in Natural History

was recognised by the bestowal of an honorary D.Sc. of Edinburgh. Hardy was a much older man and not professedly an ornithologist, but the two were of a kindred spirit, tireless walkers and happiest when far afield with all Nature as their hunting-ground. Both were fluent and prolific writers; both were prone to lard their compositions with gossipy digressions, always interesting, often frankly irrelevant; both seemed to think that a serious paper without a garniture of footnotes was naked to the point of indecency. The two were also alike in possessing a wide knowledge of the vocabulary and folk-lore of the Border, as well as the wise (and otherwise!) saws and rhyming jingles current among the Borderers.

A sojourn of four years at Ilkley in later life (1908-12)-where his stalwart figure and flowing beard are still remembered, as an obituary notice in the *Ilkley Gazette* amply testifies-brought Bolam into personal touch with the ornithologists of the Yorkshire Naturalists' Union, more especially with Mr. H. B. Booth. In course of time this brought him two commissions, first (in 1912) to guard and make notes of the birds of Hornsea Mere, and then in the following spring to keep an eye on the breeding-places of kites in South Wales, where the nests had been persistently despoiled. He had already (1906-08) spent two years in North Wales near Bala, making copious notes which formed the foundation of his "Wild Life in Wales."

After these wanderings followed a decade of tranquillity when in 1912 he settled down with his sister at Tyne Bridge, Alston, and made it his home for the rest of his life. My house, Ninebanks Vicarage, was hardly more than six miles away as the crow flies and stood at the same level (just under 900 feet), but between us rose the great ridge of the Pennines familiar to those who use the highroad from Hexham to Alston. The journey by bicycle was much the same each way-climbing up for the better part of an hour and then coasting down for fifteen minutes or so; not a difficult trip on a quiet day, but I must confess that Bolam performed it much oftener than I did. On any favourable day he might be expected, and none was ever more welcome-not least to the children in whose naturalising exploits he took a genuine interest. To my younger boy who was keen on birds it

was a great day when Bolam, warmed up by tales of Pied Fly- catchers and other things, made him a present of a copy of his " Birds of Northumberland and the Eastern Borders."

This eagerness to encourage young people in the study of any branch of Natural History was characteristic of him, and it was no unusual thing to get a letter from him saying that some boy or other was home from school and was inclined to take such-and- such a study in earnest; any advice as to the best way of tackling it would be welcome. Naturally, when I lost my colleague in the examination of essays for the Hancock Prize I suggested his name to the Council of the Natural History Society, and when invited by them he accepted the task with enthusiasm. It was congenial work to both of us, and we continued to discharge the duties for many years till changed circumstances compelled me to resign, leaving him to carry on with another partner.

In January, 1915, Bagnall, Harrison and I decided that in spite of war conditions we would forthwith embark on a project which we had long contemplated-the publication of a periodical devoted to local Natural History. By that time I was pretty certain that Bolam would gladly come in, and had no doubt that his contributions would be a valuable asset. Fortunately I was right on the first count and I do not think there is room for two opinions as to the second. Thus when next the promoters of the enterprise met in conclave at Ninebanks we were four-square, and on the general question all of one mind. Subsequent meetings when *The Vasculum* was actually in being-all held at Ninebanks- are among the pleasantest memories of my life.

Perhaps his most characteristic contributions to *The Vasculum* at that period were his "Jottings from the East Neuk of Cumberland"; for he was an inveterate jotter, and the papers I have named were simply elaborations of entries in the daily log which he religiously wrote up before going to bed. Probably it was his final jotting therein which was left unfinished when the pen dropped from his hand at the expiration of his last breath.

He wrote on many subjects, but as everyone knows, it was in field ornithology that his stores of knowledge were deepest and widest and most valuable. Among the birds he was thoroughly at home, for the necessary methods of study were entirely congenial

to him. It is no reproach to him to say that his writings on other matters--entomology, for example--are not of the same high value. Of some things, such as botany and lepidoptera, he had a wide knowledge, wonderful in one so wholly devoted to birds, but he had neither the time nor the temperament for thorough mastery. It was inevitable that he should class them among the highly interesting but less important matters; and often he caused me some amusement by his unconcealed wonder at my spending so much time and toil on such trivial things as the small fry of the Arachnida. Many were his ironical comments on the waste of time and energy, and once he tried to pull my leg by sending me from Alston (along with a few local things) a spider for identification. It was one of the "trap-door" fraternity, very like our only British representative of that tribe, and at first sight I thought he had made a most notable capture for a locality so far north; but closer examination and a peep into Simon's "Arachnides de France" revealed the snare. I sent it back labelled, "A Spaniard. Has Chapman taken to shooting spiders? "

His conversation (less frequently his writings also) was often flavoured with a whimsical and somewhat dry humour, with a strong tendency to the hyperbole of the veteran angler. Thus when I bemoaned the total destruction of my carrots by the fly, one learned that *his* carrots had flourished amazingly, attaining dimensions vague perhaps but certainly enormous. And that brings me to his gardening prowess. Once established at Tyne Bridge, his first enterprise was the building of a rock garden. Perhaps it was suggested by the presence of an inexhaustible supply of material in the rock-strewn bed of the South Tyne which forms the eastern boundary of the garden--a very pleasant neighbour, except in floodtime. This he worked into a long and picturesque ridge parallel to the stream, which he very soon stocked with a wonderful variety of rock and alpine plants, including many of the local alpenes and subalpenes. Thereupon ensued many delightful years of mingled rivalry and co-operation; and when in 1923 I began the construction of a rockery in my present garden there presently arrived a huge case of plants, the planting of which occupied my wife and myself for weeks.

Bolam was a specially acceptable lecturer at the Hancock Museum. Instinctively he could adapt himself to his audience, young or old, and his deliberate but fluent flow of speech made it easy to follow and a pleasure to listen. He was, naturally, most triumphantly successful when he chose to speak of his beloved birds. After I came north in 1922 he fell a-wandering again. To see some of our winter visitants in their breeding haunts, he went with Admiral Lynes in the spring of 1923 to Arctic Norway, travelling as far east as Vadsø and Vardø. He brought home with him the nest and eggs of the Waxwing, now in Edinburgh Museum. In the following year he covered much the same ground with Dr. H. M. Blair and Mr. J. S. Watson. December of the same year saw him, with Admiral Lynes, on the way to Abyssinia. They reached Addis Ababa safely enough, but there misfortune overtook them. The Admiral fell sick, and when he was able to travel in February there was no alternative but to return home- a sad disappointment. The Christmastide of 1926 Bolam spent with Chapman at Arcos in Spain, and that, I think, was his last expedition abroad.

His association with Chapman was one of the great things of his life. I do not know how or when it began, but it continued unbroken till the death of Chapman. When that occurred it was found that all Chapman's MSS. were left to be dealt with by Bolam, to be published or not as he thought well. His decision was to publish only the "Memories," the illustration of which was entrusted to Mr. W. H. Renssell. Like many of us who must live more or less apart from kindred spirits, Bolam found pleasure in letter-writing. I cannot better conclude this appreciation of him than by letting him speak for himself in an extract from one of his latest letters to me:-

" Regarding the 'inside-the-quill' mites your comments are most interesting and I wish you success in your pursuit of so abstruse a question. Much to my regret I just missed the chance of sending you an adult Heron last week, which I hoped might have yielded 'material.' It was shot by a keeper here (poor bird) but he had stupidly 'thrown it away' and could not find it again! Altho' I have often asked him to bring me any bird



(' vermin ') he might happen to kill and had no use for. Such folk are unbelievably 'careless'! It's very seldom that I see any kind of dead bird now-a-days, often tho' I have told him, and others, that I had a use for them.

" In the matter of the petrolised swan, I doubt your theory of the breaking of the film-surface of the water will hardly work. Did you ever see a live swan ' take the water,' either from the air or from land? It does not bear much semblance to the adroit placing of a needle on the water in a tumbler! The wavelets it makes commonly carry to the further shore, breaking any scum that may chance to be upon the surface of the pond most effectually-let alone the delicate film! No doubt the petrol would remove the natural oiliness from the well-tended plumage and, for the time at any rate, do away with their water-proofing; but even an unoiled bird's body ought still to be lighter than water one would suppose-what with air-sacs, lungs inflated, etc., etc., and ought not to sink when 'launched.' Personally I doubt whether it would, though the non-resisting of water by its feathers would doubtless be a great discomfort to the bird-quite likely enough to cause its death before very long if it were unable to get to land. The question arises, how long would it take a bird to reproof its feathers, bearing in mind the very small oil-gland (above the tail) from which the dressing would have to come? It could hardly be done in an hour or two, nor a day, perhaps not in a week or two! Meanwhile the bird might miserably perish. That's as far as I can take it, without a trial, or demonstration, but I should think the bird would be anxious to get out of the water as soon as possible and to remain out of it for some time, meanwhile getting dirtier and dirtier for want of a wash and a 'do-up' of its plumage. Would it ultimately recover? I don't know, but should think it might take it all its time. Oiling the sea must be nearly as fatal, to birds and other things, as the pollutions of our streams is likely to be to fish, etc., and *ourselves!* "

The Stoat and Rabbit problem would need to be ultimately solved in the laboratory I think; and therein I have no experience. In the field on the other hand I have had a good deal (*inter alia*, see *Wild Life in Wales*, p. 353, etc.). Fear may produce some sort of action internally on the adrenal bodies; while

terror, from sight, is at the same time causing a kind of paralysis. Scent would hardly come into play (for a bird cannot smell, yet is sometimes glued to its perch by the sight of an oncoming hawk, which as likely as not may be advancing up wind). Sight of a stoat often paralyses the rabbit, but not always; for in defence of its young, for example, a rabbit will sometimes attack and chase away a stoat from its hole, as in like manner it may put up such resistance as is possible to the attack of a cat. Rabbits of course are as well able to smell either food or enemies as are rats, etc., etc. Instinctive fear exists all right, but how it is transmitted, through long generations, is a difficult question. That it is so transmitted I had a fine illustration in the garden here a few years since. We have as you know plenty of frogs here but no Grass Snakes (whose chief food is frog); and who shall tell us how many eons it is since our Alston frogs can have seen a snake? Another point that must be premised is that a south country frog habitually screams at sight of a snake-where the sight of a snake is as common to it as is that of a stoat to a rabbit here. Otherwise one seldom or never hears a frog cry out, from fear or any other cause. Well then, I had some Grass Snakes sent to me here and had them in a frame. When one of our frogs (none of whose many-removed ancestors could ever have seen a snake) was introduced to the frame it immediately began to scream. So did half a dozen others and the frame presently became a vocal torture-house, so that I was ordered instantly to stop it! Fear of a snake does not however produce any sort of paralysis in a frog so far as I have seen, but it demonstrates a far-carried "instinct" right enough! "

There's lots more to it, but 'enough is plenty for a time' as our colonial cousins say and I must not bore you to death. Feather mites will have to await another season-same as they must be well accustomed to do when they are shed inside a moulted feather and have to consume their soul in patience (if they have souls?) till another host of the right species comes along to give them another feast and a flight.

"But, look you, are all these mites to be called different Species? Or may not the host, or the environment develop such outward differences that we fail to recognise old friends (or foes!)

in new togs? May they not go through varying life cycles just as tapeworms and some other things are known to do? The descendants of inside-the-quill mites may not be such recluses as their parents? Inside a feather for a year or two may be quite a good hatching ground for new forms or varieties?

Yours,

GEORGE BOLAM."

### **WILLIAM RAW: 1886-1934.**

By the death of William Raw the North has lost one of its best field naturalists, and a man of high character whose friendship was prized by all who had the good fortune to possess it.

Born at Ruswarp, in 1886, the son of a school inspector, his father died while he was but a boy, and he had to work for the support of his mother and sister. He is said to have been a miner for a time, and is known to have been a sorter and telegraphist in the Whitby Post Office, and to have worked on the North Eastern Railway telegraphs; but studying mathematics, electricity, and other subjects at evening classes, he was attracted to wireless telegraphy, and qualified as an operator when wireless was young. The next few years were spent at sea, on Cunard and other liners, sometimes cruising, and so he visited the West Indies, Africa, and the Amazons, always with an eager eye on the birds of these places. When the Great War broke out his ship was in New Zealand, and was commandeered as a transport. While waiting for the New Zealand troops Raw pointed out to his superiors that there were not enough wireless operators, and that post office telegraphists could soon be trained for the work; the suggestion was approved, he was put in charge of the class, and the result was the destruction of the famous raider, *Emden*. It happened in this way. One day, while the convoy was on its way to Egypt, Raw's assistant-the pick of the telegraphists-roused him, reporting that there was an S.O.S. on the air, but that someone was jamming it and he could not read the message. Raw could; and having attracted the attention of the flagship with some difficulty, he passed to the admiral the message from Cocos Keeling Island announcing the arrival of the *Emden*; H.M.A.S. *Sydney* was thereupon detached from the convoy's escort to deal with

her, and the result we all know. Soon after this he was posted to the Naval Reserve and sent to the important military wireless station in Egypt, where he spent some years, devoting all his spare time to ornithology, and unhappily contracting, while wading in the marshes after birds, a tropical disease which so damaged his heart that the future held only ill health and an early death for him.

In 1920 he came to Newcastle as local secretary of the Wireless Operators' Association and did splendid work, in a very difficult period. The judgment of his fellows is found in the official organ of the Association, which says, "we have lost a great friend, a wise counsellor, and a bonny fighter for the principles for which this Association has stood for many years. His geniality, integrity and transparent sincerity gained for him the love and respect of all those who had the pleasure of coming into personal contact with him." All who knew him well will endorse this.

Unfortunately his health grew worse, and in 1927 he returned to his native Cleveland, hoping that life in the open air would be helpful. At Whitfield House, Goathland, he opened a private hotel, and aided by his wife made it a great success, naturalists in particular resorting there to have the benefit of the help he was always so ready to give. The change was beneficial and delayed the end, but his heart grew worse, and in October, 1934, he died, all too soon.

Son and grandson of ornithologists, it is not surprising that he should so love the birds he studied so closely, or that, his views widened by study in many parts of the world, he should have been one of the best of the many great field ornithologists the North has produced. But he was more than a bird lover, a very earnest student, and it seems probable that if his health had permitted him to continue the scientific work he had in mind he would have obtained results of very real value.

Great as a naturalist, he was great also as a man. During the years he spent in Newcastle he had much to contend with, yet although a chronic invalid, who ever saw him despondent or bad-tempered? Often checked in his ambitions, often misrepresented, was he ever irritable or peevish? During those years he made friends who will never forget, and who feel themselves better men for having known him.

## **THE BIRDS OF HORDEN.**

### **Notes of an Occasional Visitor.**

G. F. COURTENAY.

It is surprising what an amount of interesting bird-life may be observed within a very small area if only one looks for it. The scene of the following observations covers no more than half a square mile, with of course the outlook from it over the sea. It is a simple matter to measure its extent for it forms almost a rectangle, with its long side just about a mile in length, and its short side half a mile. The long sides consist of (1) a very slightly curved line of sea-shore running in a direction between N. and N.W. from the mouth of Castle Eden dene; and (2) the railway line parallel to this at a distance from it of half a mile. The short sides of the oblong connecting these two at their extremities, are formed by two ravines, one being the road from Horden Station down to the sea; the other a similar ravine (though with more of a path than a road through it) at the other end. Within this quadrangle there are two more ravines stretching from the railway to the sea; one just about midway between the two I have mentioned, the other midway between this ravine and the northern boundary of the area. These ravines are (or were) pretty well wooded (though not with old or big trees), with a good supply of undergrowth. The northernmost of them seemed to have a special attraction for birds. It usually proved a profitable hunting-ground. The shore is sandy with outcrops of rock here and there, the rock becoming more abundant at its northern end.

Horden Colliery is an uncomfortably close neighbour; in fact, the area is invaded by its ever-growing waste heap. When these visits began the colliery was in its infancy, with a very small number of residents in its vicinity. By the time they ended the population had grown to some ten thousand! The effect of this on the bird life of the district, it need hardly be said, has not been favourable.

About three dozen visits to this area were scattered over a wide period, stretching from May, 1907, to October, 1924, with

an interval of nearly eight years (September, 1912, to March, 1920) when no visits were paid.

Yet, few and occasional though these visits were, they revealed a good deal that is of interest in the local bird life. The bulk of them were paid in the fall and first three months of the year; none in July or August.

*Fieldfares and Redwings.*-Redwings were much more frequently in evidence than Fieldfares. In fact there were only two years in which I did not see a Redwing, and but two in which I did see a Fieldfare. It is remarkable that this is the exact reverse of my experience (during practically the same period) in the Hurworth Burn district, which is no more than five or six miles from Horden. It was in October that the Redwings were mostly about, and I noticed that they were often very shy and wild. I have heard a note from them, like "anck, anck," and once some soft subdued singing that I think one of them was responsible for. When all the country has been under snow I have seen them down on the beach.

*Ring Ouzel.*-On October 23rd, 1908, I had the rare pleasure of seeing, and enjoying a good view of, a Ring Ouzel. It was feeding on a hawthorn in the northernmost ravine, and returned to it two or three times before finally disappearing.

*Wheatear.*-On May 10th, 1907, I happened to hit a day when Wheatears were evidently passing through. On the open ground between the station and the sea they were all over the place, in beautiful plumage. A month later there was not one to be seen. Indeed, apart from that occasion I have only once come across a Wheatear, a solitary one on May 28th, 1909.

*Stonechat.*-It is pleasing to record that the Stonechat seems to be holding its own at Horden. I saw it more frequently in the later than in the earlier period of my visits. The northernmost ravine appeared to be especially favoured by it.

*Whitethroat.*-The ravines (particularly the northernmost) with their abundance of undergrowth and low bushes were just the place for Whitethroats; and in visits in May I used to find plenty about. On one occasion I found two nests-one not yet finished, the other containing three eggs.

*Wood Wren.*-One hardly expected to come across a Wood Wren at Horden, but I did so just once (May 8th, 1908). It was passing through, I suppose, to a more congenial habitat.

*Sedge Warbler* .-Sedge Warblers were not as plentiful as one would anticipate. I have but two entries of having met with them, both in the one year.

*Marsh Tit and Coal Tit.*-The Marsh Tit was very commonly seen and heard; but I never came across a Coal Tit within the area. This agrees somewhat with my experience in the not distant Hurworth Burn district. There Coal Tits were much less in evidence than Marsh Tits.

*Pied Wagtail.*-It may be worth recording that on a severe mid-winter day (January 13th, 1911), following a blizzard the day before, a Pied Wagtail was flitting about the mouth of one of the ravines.

*Grey Wagtail.*-On two occasions, both in October but in different years, a Grey Wagtail put in an appearance.

*Meadow Pipit.*-On a bitterly cold day with four to six inches of snow (March 4th, 1909) there was any number of Meadow Pipits down on the beach, accompanied by Thrushes, Blackbirds and Redwings. It was the same on January 27th, 1910, a day of similar conditions.

*Swallow.*-On October 20th, 1911, a couple of Swallows were flying about. It was interesting to see them on the same day with Fieldfares and Redwings.

*Chaffinches and Greenfinches* .-Both Chaffinches and Greenfinches were very numerous, assembling in large flocks, especially in October. In January, 1923, so extraordinarily mild was the weather that on the 26th, in addition to Skylarks soaring and singing, I heard a Chaffinch singing (not its full song; about half of it and no flourish at the end) and a Greenfinch piping and "cheeing."

*Bullfinch.*-In the early years (and ominously, only in the early years) of my visits I met with Bullfinches more than once, usually in the northernmost ravine. The last occasion was October 7th, 1910. It was noticeable that as often as not it was when the country was under snow that I saw them.

*Yellowhammer*.-I have a note of a Yellowhammer singing on October 22nd (1909), which seems a late date for it.

*Snow Bunting*.-Snow Buntings I saw but twice in the Course of my visits, on each occasion severe weather when the ground was covered with snow. This brought them down to the beach.

*Hooded Crow*.-Only twice seen; in 1908 and 1910, and not since. Here, as elsewhere in County Durham (so far as my observation goes) this would appear to be a vanishing (if not vanished) species.

*Magpies*.-I have only once seen Magpies within the area, a couple in one of the ravines on May 6th, 1910.

*Cuckoo*.-On June 20th, 1908, I had a good view of a young Cuckoo, able to fly, attended and being fed by a Meadow Pipit.

*Kestrel*.-Hovering and being mobbed by small birds, October 23rd, 1908.

*Mallard*.-Apart from Diving Ducks, my only notes of Ducks at Horden are of a flock of Mallard resting on the sea, January 21st, 1909, and of a similar flock, similarly occupied, a year later, January 27th, 1910.

*Scaup*.-There was a sprinkling of Scaup in a mixed company of diving ducks off shore on March 24<sup>th</sup>, 1922. They were continually preening themselves, and the dark green gloss of their heads was very noticeable when the sun occasionally shone on them.

*Goldeneye*.-On January 13th, 1911, the only Goldeneye I have identified at Horden was with a party of Longtailed Ducks. After a while it flew off by itself.

*Long-tailed Duck* .-Perhaps the most interesting of all the birds to be seen at Horden was the Long-tailed Duck. It occurred so regularly, and always at just the same spot, off the mouth of the northernmost ravine. When, after the long break in my visits, I returned to Horden, it was curious to see a flock of Longtails floating about exactly where I had last seen them nine years before. One could have imagined that they had been there ever since. From January to March was the time when they made their appearance. There were usually other ducks associated



with them, Scaups, Scoters, and once a Goldeneye. The finest view I had of them was on March 24th, 1922, when at the usual spot there was a mixed company of diving ducks, numbering upwards of fifty. Of these, more than two-thirds were long-tailed, the majority of the remainder Scoters, the rest a sprinkling of Scaups. There was very little flying about. Occasionally a couple or an odd one would take a short flight. One bird, a young Scoter I took it to be, detached itself from the crowd and explored shorewards till it came right into the break of the wave. It then swam out again, diving through the surf, but riding the unbroken waves. A few gulls were always with the Longtails, and it was amusing to see them ignominiously left on the surface, unable to follow, when the ducks dived. This they did all together, or more precisely, one after another in turn, but in as rapid succession as possible.

*Scoter and Velvet Scoter* .-On one occasion (January 21st, 1909) some Velvet Scoters were very noticeable in a flock of diving ducks. The Common Scoter was more often seen, though by no means so frequently as one would expect.

*Partridge*.-On March 4th, 1909, it was curious to see Partridge squatting very conspicuously on the snow that covered the ground. They were all in pairs.

*Golden Plover*.-Golden Plover I saw but twice: three on the shore on one occasion, and eleven years later some in a field.

*Ringed Plover and Dunlin*.-The shore at Horden is evidently not of the kind to attract waders. I saw a solitary Dunlin once; and once a pair of Ringed Plovers.

*Oystercatcher*.-So far as my experience goes, the Oyster-catcher is not at all a common bird on the Durham coast. My only entry for Horden is of four together on the shore on June 14<sup>th</sup>, 1907.

*Terns*.-The only Terns I have seen at Horden were half a dozen moving southwards on September 27th, 1912. I have no note of the species.

*Razorbill and Guillemot*.-An odd one now and again was all that one saw of either of these species, the Razorbill a little more frequently than the Guillemot.

*Red-throated Diver.*-Between October and the end of January it was not uncommon to see Red-throated Divers (usually single birds) either flying past or swimming and diving, sometimes very near shore.

*Great Crested Grebe.*-On October 14th, 1920, there was the interesting spectacle of some Great Crested Grebes in twos and threes, swimming and diving, and every now and then making a short flight. Their behaviour might be described as skittish compared with the sedate deportment one usually associates with this bird.

## **ENGLAND BEYOND THE TWEED:**

### **Its Places and Place-names.**

J. E. HULL.

The liberties of Berwick comprise some four square miles or so on the north side of the Tweed, English since 1296 (save for certain brief intervals), but not regarded legally as part of the kingdom of England. There was a resident Governor, direct representative of the king, from the 16th century onwards; but that and other marks of independence were gradually dropped, though the style of "England, Scotland and Berwick-upon- Tweed" survived up to the middle of the 19th century. The Municipal Act of 1843 made Berwick an ordinary English town, and now it and its lands are part and parcel of the county of Northumberland, though there are still a very great number of English people who imagine they have entered Scotland when they have crossed to the north end of one of Berwick's bridges.

There are no villages or hamlets within the bounds of Berwick, but the names discussed below will be found in the 6-inch Ordnance maps. The names of the fisheries have a peculiar interest of their Own and for that reason I have included those on the south side of the river along with the rest. Street names have also their special interest and I have ventured to include a few no longer in use.

ABSTELL.-Part of what is now Whitesands fishery-which part, it would be rash to say. The name seems to be an abbreviation of Abbey Stell, and therefore probably belongs to that part of "Berwick stream" which was given to the monks of Melrose by Malcolm IV (*Cart. Melr.*, 56). A *stell* was a fixed erection in the water for trapping fish, originally of wattle open enough for the flow of water and for the passage of small fish. The essential part was a cruive or enclosure entirely closed on three sides, the fourth (facing downstream) partly closed by two wings converging inwards but not meeting. O.E. *stell* and *stael* are variants of O.E. *steal* or *steall*, i.e., E. *stall*. A stall and a stell are both enclosures with an open entrance; but a stall is the usual place occupied by a man or beast, while a stell is one which sheep or fish are caused to enter unawares or by compulsion of circumstances. A simple V-shaped stell may be seen in the pasture on the north side of the road just beyond Sanson Seal. As the fishing stell marked the position of a fishery it soon came into use as the name of the fishery itself; and presently it was very naturally applied to fixed nets, which were in use as early as the 12th century.

ADSTELL.-David I gave to the monks of Dunfermline *tractum de Aldestelle*. "Tractum (lit. draught) is apparently the same as *rete* (net), shot or sheet-a single point or batt from which a net was shot and drawn in again. From an inquisition held in 1480 we learn that this fishery was worked with two boats and two nets and was entitled to "two draughts for ilk cobill and ilk net." Adstell is thus the same as Aldestelle, i.e., old stell, and was therefore in the 12th century already considered an old fishery. Calet, Adstell, and Outwater Stell are now merged in one under the name of Shoreside.

ALLERBUSH.-In the fork of the Foulden and Paxton roads; a plot enclosed as meadows in 1730. O.E. *air*; M.E. *alter*; E. *alder*. Allerbush also occurs as another name for the Burrs in a deed of 1653. The place so named (along the Whitadder, just above its mouth) was a much more likely home for alders than the present Allerbush.

ANNEY.-Occasionally written *annow*, *anna*, or *annet*, Old Northumbrian *an-ee* or *an-ey*. *Ee* is land partly or wholly bordered by water, as in Lindisfarne-*ee* and Hagustald-*ee*. In S. Northumberland it is *ee-land* at Ponteland and just above Newburn. In the Norse regions of N. and S. Tyne it is *eals*, i.e., presumably, *ee-walls*. Bede uses the form *eu* as in *Herut-eu* (i.e., Hart-*ee*), his name for Hartlepool. *An* is solitary, single, or separate, as in Ancroft, Anstead, Amble (An-bell), Antre-*chester* (i.e., one-tree-chester). The combination as the general term for a separated piece of riparian land is a purely local development. It was still in independent use in the beginning of the 17<sup>th</sup> century, when there was a dispute concerning the ownership of an *annow*. It was the strip of land by the river at North Bells, usually called the Coroner's meadow. See below.L, Burr Anney, Ethermouth Anney, Lumsden's Anney, Thistle Anney.

ANNOSIDE.\_An alternative name for New Water fishery, which lies alongside of Lumsden's Anney and now includes Cole also (its lowest part).

BAITS CROSS.-Commonly written Bait's Cross, as if Bait was the name of a sometime Owner or occupier. But *bait*, *bate* or *batt* is a common name for grazing land. M.E. *baiten*, to feed, a word of Scandinavian origin (cf. Swedish *beita*, to pasture). Cross applies to something that has disappeared, perhaps once standing at the cross roads-a boundary pillar, or memorial stone, or even a gibbet.

BAITS STRAND.-Strand is Lowland Scottish for a small ditch or rivulet such as on Tyneside is called a gutter. The reference would be to the Grains Burn. O.E. *strand* is margin or shore, and the use of ditches and streams as boundaries may account for the change of meaning.

BALDESBURY.\_The usual O.E. *burh* is out of the question here, so the second element must be O.E. *beorh*, a hill. The first part is variously spelled, but *Balders* is the best authenticated and probably commemorates some ancient occupier. The name is Anglian as well as Scandinavian.

**BELLS**-Throughout the Border country *bell* is a hill, and there must have been an O.E. word *belle*, most probably borrowed from the Scandinavian. On the western Border the corresponding verb is still in use-*bellen*, to swell. On the Tweed the name Bells belongs properly to the territory of West Ord where the hills come close up to the river and give name to the fisheries of High and Low Bells, together known as South Bells since the fishery of North Bells came into existence in the days of the Commonwealth.

**BLAKEWELL**.-Sometimes written Blackwell, which is probably a mistake; for the second part of the name is certainly *weel* or *weill*, a smooth stretch of water (Scand. *hvila*, a place of rest or stillness), and presumably the former part is also Scandinavian -*bleik*, shining (in O.E. *blaec*). It is the fishery on the Tweed-mouth side of the river crossed by the new Tweed Bridge.

**BLAYSTONE**.-This is the upper part of Blakewell, and was owned by the monks of Kelso as a separate fishing attached to their estate of Woodhorn. Sometimes called Bluestone, which gives the right meaning, the first syllable being the same as in blaeberry-Scand. *bla*, blue.

**BOATHOLES**.-The fishing waters between the railway bridge and the old bridge, north side. Formerly a perquisite of the Constable of the Castle. Hardly practicable for wear-shot fishing, but no doubt very profitable when other appliances were permitted. The present name seems to be quite modern, and I can give no explanation of it. The two fisheries known in the Middle Ages as "The Lawe " and "Tyt" were probably in these waters.

**BOGEND**.-A farmstead on a spur of the Halidon ridge, above Scuddylaw. O.E. *bog*, shoulder or bend (of the hill). Boghead in West Allendale is a farmstead similarly situated.

**BONDINGTON**.-The ancient village corresponding to Berwick without the walls, older (according to the testimony of the names) than Berwick itself. The name means the town (*tun*) or township of the Bondings, who were so called from the original name of the place. In such cases the earlier name is nearly always

lost but it happens that Simeon of Durham has preserved for us the name of Thornburn in Glendale, whose inhabitants were called Thornings, so that their "tun" became known as Thornington which name it still bears. Thus Bondington preserves only the first syllable of the original name, i.e., *Bond*. That, however, was the significant part, and intimates that the territory was held direct from the lord (in this case most probably the king) under a bond, by which the tenants were bound to render special service year by year. There was another Bondington in Forfar. It may be noticed that the names of the neighbouring townships were formed in the same way-Edrington and Mordington.

**BRADTHURGHGANG.**-In more modern speech "the broad thoroughfare." An old street name of the time of Edward III. It is obviously an equivalent of the King's highway, and must therefore refer to the "High Street," i.e., Marygate or Hide Hill or both.

**BROAD.**-In the 13th century Brade, O.E. *braedu*, something spread out (in width); usually water. In its modern form of *Broad* the word is still extant in East Anglia, but elsewhere survives only in place-names, though its substantive use is commonly overlooked. The present name belongs to an expansion of the Tweed, split by two narrow islets into two channels, of which the southern is much the wider. It would seem, however, that the narrower northern channel-at least behind the lower and larger islet, where it is called the Orret-represents the ancient course of the river, so that this larger islet or batt was never Scottish, nor ever rightly included in the liberties of Berwick, being part of the estate of West Ord. The "broad" gave its name to the adjacent fishery on the north bank, and the land between Tweed and Whitadder, now known as Gainslawhaugh, was formerly Broadshaugh.

**BULL MEADOW LETCH.**-The enclosed S.W. corner of Baldersbury next to Cocklaw. The word "letch" (which is akin to *leak*) indicates its character. In the Guild Book of 1608 it is said to be full of "bogs and quagmires."

**BURR ANNEY.**-A piece of land in the angle between the Tweed and Whitadder. M.E. *burre*, Eng. *burr*, a rounded lump with a

rough surface, such as the fruit mass of the burdock or the horse-chestnut. Apparently Scandinavian as Danish *borre* is the burdock, and Swedish *borre* is the sea-urchin. Locally " burrs" are undressed stones used in their natural state.

**BURRELL'S TOWER.**-This building stood on Hide Hill near the Cat Well and directly on the line of the wall thrown across the town from the King's Mount to the old Bridge Gate to complete the Elizabethan fortifications. It was necessary to remove the tower, and a compensation of £160 was paid to the owner.

**BURRS, THE.**-"A parcel of ground at the foot of the justices' meadows" (Guild Book, Feb., 1680). The Private Guild on July 19th, 1678, made order that the lessee was " not to bring home the hay out of the Burrs through our (i.e., the justices') meadow" until the day after the mowing of the Low Haughs was begun, on pain of fine and imprisonment; but he might take it over the river whenever he pleased.

**BUTTRESS TOWER.**-One of the towers of the Castle, over-looking the western stank, midway between the head of the White Wall and a strong buttress supporting the curtain wall.

**CALLET.**-Also spelled Calet, Calot, Kolet. The name seems to be Celtic, and is probably equivalent to the modern Welsh *caled*, hard. It is situated on the hard sand immediately below the town.

**CAMPHILL.**-Farmstead on the south-east slope of Halidon Hill. The name is modern and probably due to a tradition that the army of Edward III camped on the spot before the battle in 1333.

**CANTY'S BRIDGE.**-Familiar name of the bridge over the Whitadder on the way to Paxton. I do not know who Canty was.

**CATWELL.**-Half-way up the slope of Hide Hill on the east side. Mackenzie says it had medicinal properties, with what truth or on what authority I do not know.

**CLAYWALLS.**-The land by the Grange Burn between Whitedamhead and the mill was known as the Grange Walls, and a certain part of it which was leased along with the mill was called Clay Walls. *Walls* as a name for grazing lands and meadows is a relic of the Norsemen representing the Norse *völl*. The word

seems to have been pretty widely adopted by the English, but in the Anglian regions it generally takes the form of *well*, which probably represents the Norse *plural*.

COCKLAW.-A very common name for heather-clad hills. *Coch* in Welsh place-names is applied to the colour of heather when in *bloom*. Cf. Cockenheugh, near Detchant. *Law* is, of course, O.E. *hlaew*, a hill or rising ground. It is quite possible, however, that *cock* here refers to the moorcock, though I think that the explanation given above is much more probable.

COLE was the ancient name of the stream which on the Ordnance maps is called the 'Common Burn. It was also the name given to the fishery in the Tweed at the mouth of that stream, though in a deed of 1639 it is called Colesmouth. The rising ground on the north bank of the stream was known in former times as Coleheugh; but all these names seem to have gone out of use long ago. *Cole* or *Colne* is a common stream name of Celtic origin apparently given where hazels were unusually abundant on the banks. *Heugh* (O.E. *hoh*) is a steep bank.

CONUNDRUM.-A farmstead on the north road at the S.E. corner of what used to be the common pasture. The name has all the aspect of an ancient Celtic name, but as far as records go it is quite recent. If really ancient it should mean "coney ridge."

COVERT-WAY.-A military term from the French *chemin convert*. A sunken road something like a communication trench leading to the "redoubt" on the cliff top. In the 16th century. When the new fortifications were built, it was proposed to carry the Wall to the sea along this line; but the plan was abandoned and the covert-way turned into a ditch with its southern lip raised into an earthwork forming a very formidable defence when the ditch was filled with water.

COWGATE.-The original Cowgate (in the vernacular usually Coopert, Coopert Gate) opened directly upon the Covert-way which was probably the chief reason for its existence. Nor does it seem possible that there should ever have been any reason for associating it with cows, since the Snook and the Magdalen Fields were always appropriated to the garrison, who had horses and



"beeves," but not cows. It is just possible, therefore, that Cowport and Cowgate are both wrong and the familiar Coopert Gate correct, the former part being a corruption of Couvert.

It seems that there was once a street called Cowgate, for the Cold stream chartulary speaks of "*terram in Cowgate infra villam de Berwick.*"

CRABWATER.-The well-known fishery at the angle of the pier. The components of the name need no explanation, but why they are used here I do not know.

CUMBERLAND BOWER.-This with Baits Cross, Baits Strand, and Sanson Seal formed the Garrison or Horsemen's Meadows before 1604, when it became the property of Sir George Hume. It is a triangular tract on the north side of the Fouliden Road next to Mordington. It was long known as Crawforths Closes from the name of the first occupier on the dispersal of Lord Mordington's lands. The present name apparently dates from the period of the '45, when the hero of Culloden was very popular in Berwick.

ELSTELL.-A fishery at Spital which once belonged to the monks of Alnwick. It extended from the Carr Rock to the old Jetty. *El* is difficult to explain. *Elle* occurred as an independent word in the middle ages at Bamburgh and Ellingham. The earliest form of Elwick was Elle-wick; and probably the first element in Elford and Elbottle was the same. In literary O.E. *elle* meant the rest or remainder, so that in place-names it might be applied to an isolated part of a property or estate. Celtic *el* as a prefix would give nearly the same sense for it means separated or farther away.

ETHERMOUTH.-A fishery at the mouth of the Whitadder. In the Scottish Rolls of the 14th century the name is written Eder- mouth. See Whitadder below.

FAIRNEY FLAT.-In the Coldingham chartulary this land is mentioned under the name of Frereflat. When *frere* became more or less unfamiliar it gave place to *fairy*, which in its turn was displaced by the still commoner *fairney*, i.e., ferny.

FLESHERRAWE.-This Flesher Row or Butcher Street of the Scottish Rolls was no doubt the same as "La Boucherie" mentioned in the Kelso charters. There is nothing to indicate its actual position in the town.

FOLESTREAM.-The ancient name of a fishery on the north side, perhaps the same as North Yarrow.

FOULFORD.-The place is not a ford, nor the approach to a ford; but before the walls were built, or even afterwards when the Ness Gate was in existence, it would provide a way of going " forth the town" to the river bank. In a similar way the Forth at Newcastle came by its name. The first syllable is the O.E. *ful*, muddy.

GAINSLAW.-O. Fr. *gagner*, to graze, to pasture. The use of the French term shows that this name was due to the garrison. It may have been given in contrast with the adjacent Cocklaw, i.e., grass-land as contrasted with heather-land.

GALLEYHILL.-Otherwise Gallowhill. The rising ground immediately to the west of the Castle on which the gallows was erected; no doubt the same spot on which King Edward executed the two hostages when in 1333 Seaton refused to surrender the town according to agreement. See Hang-a-dyke Nook below.

GAMBSLANE.-The ancient name of Easter Lane. The first part of it is probably a personal name.

GARDO.-French *garde-eau* is a water bailiff. Gardo is the fishing on the south side of the Tweed next to Bailiff's Batt (which is the first below the old bridge). Evidently both of them were perquisites of the water-bailiff in ancient times.

GRAINSBURN.-By a natural corruption generally known as Grangeburn, sometimes spelled Grainshburn. The Scandinavian *gren*, the prong of a fork, a twig of a branch, was frequently applied to the confluent rivulets forming a stream. Grangeburn Mill was a flour mill the rent of which was given to the poor. See the next.

GRANGE WALLS.-Grass land adjacent to the Grange Burn. Part of it, called Clay Walls, was let with Grangeburn Mill. *Walls* is used throughout the Border region to signify grass lands,

but is particularly frequent about the South Tyne, where such names as Burnt Walls, Mossy Walls, etc., are very common. Wall represents the Scandinavian *völlr* (the r is silent), the common Norse name for grazing lands. The "head" of the Grange Walls was the poor land in the S.W. corner of the New Close (near the Whitedamhead) more commonly known as the Moory Spot. It was enclosed in the 18th century as a night-fold for cattle.

HALIDON HILL.-O.E. *halig-dune*, sacred hill. The reason for its being so called is unknown. The nunnery of St. Leonard stood on its southern slope, but the name Halidon was in use long before the foundation of the nunnery.

HALLOWSTELL.-A fishery between Elstell and Sandstell Point. Originally Haliwarestell. *Haliware* is "holy people," i.e., monks. The fishery belonged to the priory of Holy Island.

HANG-A-DERE-NOOK.-Popular etymology has persistently identified this spot with the execution by Edward III of two hostages, one being a son of Seaton the governor of Berwick. The place is on the river bank on the west side of the railway bridge near its southern end, much too distant from the walls of the town to fit the accepted story of that incident. Moreover, hang-a-dike is a very common version of hanging-dike (O.E., *henge-dic*), a dike on a steep bank. *Nook* is an angle or corner; Gaelic *niuc*, which the vernacular nearly reproduces.

HAWKIT COWE-Streaked or blotched cow; a name given to some unidentified piece of land, apparently a part of Baldersbury.

HEXTELL.-The first syllable is the dialect word *heck*, now used only of feeding-racks for live stock, but formerly (and still I believe in some places, but not locally) of a similarly constructed contrivance for catching fish. Evidently in the earliest days of this fishery a "heck" was employed and gave the place its name.

HOB'S ISLE.-In the river at New Mills. *Hob*, *alias* Hobthrush, a sprite or goblin, had a strong partiality for islets; for example, the islet near Holy Island Priory was often assigned to him, though usually called St. Cuthbert's.

HOLDMAN WALL.-Also Holdman's Cross. Apparently the natural breakwater or ridge of rock enclosing the mouth of the

Tweed on the north side was known to the Anglian settlers by its British name, which has come down to us in the Anglicised form of Holdman. As in Brownsman, Swadman, etc., the last element corresponds to Welsh *maen*, rock. With the first part we may compare Welsh *heol*, a path, something one may walk along, distinguishing this rock from the rocks named above, which are islands. The Cross was some sort of beacon at the outer extremity; and the ridge was strengthened by a strong wall in the 16th century.

HUGH SHIEL.-An important fishery on the south side, opposite to Broad and adjoining South Bells. Like the latter, it is named from the rapid rise of the land from the river. *Hugh* is the same as *heugh*, a steep slope. *Shiel* is the hut or shed which marks the position of all the fisheries at a distance from the town. It is identical with the Scand. *skyl(i)* or *skal(i)*, the hut or shelter occupied in summer by herds "summering" their cattle on the hills.

HUNDWATER.-The old name of a fishery somewhere between New Water and Abstell. O.E. *hund*, dog.

JINGLING GATE.-M.E. *ginglen*, to clink. On or by the causey outside the Marygate, near the place where the water passed under the causey to the Castle stank. The name has been transferred to a gate on the railway bridge leading to Rippeth's Fields.

KERGATE.-Medieval name for a branch of Walkergate perhaps that which is now called Chapel Street.

LATHAM.-Once the Outer Castle Fields, the unenclosed part of the lands assigned to the Captain of the Castle. Apparently it was originally *lathum*, barns-locative or dative case of a word borrowed from the Scandinavian *hlatha*. A common farm name as might be expected.

LAW.-An old-time fishery on the north side which cannot be definitely located. The name represents O.E. *hlaew*, a hill, and may possibly refer to the Castle hill.

LETCH.-There were two letches within the bounds-Bullmeadow Letch on the southern confines of Baldersbury, and Mere

Letch at the western extremity of the New Farm (West). The word is applied to an open drain or slow stream in wet land, or to the land itself. Letch has no known representative in O.E., and has always been purely vernacular. Like E. *leach* it may be traced back to O.E. *leccan*, to wet or moisten. The Mere Letch lay next to the Scottish boundary, so it may be taken that *mere* represents the O.E. *maer*, a boundary mark.

LILLIESTEAD.-The riparian part of the Low Haughs, i.e., the strip lying along the Whitadder between Canty's Bridge and the Burrs.

LOUGHEND.-One of the farms of the Common Pasture, next to Conundrum, northward. *Lough* in old Northumbrian is a lake or pond, and Lough House is a common farm name.

LUMSDEN'S ANNEY.-The riverside part of New Water Haugh, separated from the rest by a ditch. The name here quoted is the form used in the Charter of 1604. In the Guild Books it occurs twice in the form of Lumsdon, evidently a reference to the Charter. In the Charter of James II, in which it would necessarily be copied from the Charter of 1604 or from a copy of it, the form is Lunsdane. Initial L and H of that period could easily be confused; and one naturally wonders if a mistake has not been made and repeated, and that the real name should be Hunsdon. For Lord Hunsdon, as Governor and therefore head of the garrison, held it for many years, it being Crown land held by the commander of the garrison at a nominal rent. It happened that Hunsdon, having been absent from Berwick for a considerable time had allowed the use of the land to Sir William Selby, who presently claimed it as his own. Thereupon Hunsdon wrote to his deputy that the claim was absurd; he himself had held the land from the Crown for many years and still held it, as his predecessors had always done. I have not seen the original letter, but if the copyists are to be trusted, he called the piece of land "Lonsdale's Annet." No Lumsden or Lonsdale was ever Captain of the Castle or Governor of Berwick.

MAGDALEN FIELDS.-The Hospital of St. Mary Magdalen stood some fifty or sixty yards north of the round bastion called the Lord's Mount at the north-east angle of the old walls. The land

called Magdalen Fields is entered just beyond, where there is a break in the line of the dry ditch now known as Spadesmire which is the southern boundary of the fields.

MAISON DIEU.-Strictly, this was the Hospital called Domus Dei but after that institution fell into disuse the name was transferred to the site of the building and all the space between it and the river. The latter was banked up with ballast and converted into a quay, still retaining the name of Maison Dieu. As ballast accumulated it was gradually extended eastward. It is to be understood, therefore, that from the time of Elizabeth onward Maison Dieu means the quay, including the whole space between the river and the walls.

MARSHALL MEADOWS.-Between the high road and the sea at the N.E. corner of the liberties. Attached to the office of Marshall or Deputy-Governor until 1604.

MARY FLAT.-Named along with Frere Flat (Fairney Flat) in a Coldingham charter and presumably somewhere near it. *Flat* is explained to be an appropriated portion of the Common Pasture. We may take it, therefore, that Mary Flat was such a portion set aside for the benefit of the Church or Hospital of St. Mary, both of which stood very near where the Scotsgate now is.

MOORY SPOT.-A general term for a tract of poor sward, and on Such places in the common sheep pasture *bowghts* (booths) might be set up for the milking of ewes, or "divots" might be cut, when permission was given. One place "at the head of Grange Walls" was specially so called. It was the south-west corner of the New Close, adjoining the southern boundary of Sanson Seal.

MUCKGATE.-The name occurs in the Patent Rolls of 1348, referring no doubt to one of the two gates which then led to the tidal banks of the river, viz., the Shoregate and the Nessgate.

MURDERER.-The word is an adaptation of the O. Fr. *meurtriére*, a gun emplacement; also one of the smaller pieces of ordnance. The Murderer was a little turret with embrasure for a single gun, standing a few feet outside the Edwardian wall not far to the eastward of its north-east angle. At that point the difference in the ground level made it necessary to have a stank-head

or dam across the ditch, and the Murderer was placed so as to command the passage over the stankhead. The turret could only be entered from a tower in the wall close by, with which it was connected by a vaulted passage; and because of that connection the tower was called the Murderer Tower.

NARROWGATE.-A street in the Ness in the olden days, running east and west. Here the fish-market was originally held, till the narrowness of the street caused it to be removed into the roomier Sandgate, to accommodate the growing trade.

NESS.-A Scandinavian word signifying a tract of land projecting seawards, sometimes forming a definite headland or cape, but at other times applied to broader territories where the projection though real enough was less appreciable, as at Harterness, Holderness, Furness, and elsewhere. So, at Berwick it means simply a seaward extension, and is the part of Berwick nearest the harbour entrance. In the Middle Ages it was mostly open land.

NEWGATE.--For many years the current name of the gate now known as Scotsgate.

NEW MILLS.-On the Whitadder above the Paxton road. It was an enterprise of the Corporation even more unpopular with their Scottish neighbours than the North Bells fishery: moreover, it was a dismal failure. Commenced as a fulling mill, it was never really a going concern. Converted into a corn mill with (officially!) the monopoly of grinding within the bounds, it was no better: no lessee could make it pay; no guild order could maintain the monopoly. Lord Mordington claimed and received compensation for damage done to his land by the damming of the river; the gentlemen of the Merse declared that it ruined their fishings in the Whitadder, and lacking redress rode over in true Border fashion and laid it waste.

NINE WELL HEADS.-A cluster of springs in the middle of the New Close. The water was gathered into an open "watergate" fenced on either side, and carried by a conduit under the Foulden road to the cistern on the Calfill.

*(To be continued.)*

## THE SOCIETIES.

### NORTHERN NATURALISTS' UNION.

By invitation of the Northumberland and Durham N.H.S., the autumn meeting of the Union was held at the Hancock Museum on December 8th, when Dr. J. A. Smythe gave a most interesting lecture on "The Cheviots," in which he outlined the geological history of the group, and showed how its topography was affected by glaciation.

A field meeting will be held on Saturday, June 15th, probably in the Deerness valley, and a second on July 13th, at Blanchland. In connection with the latter, arrangements will be made for a week-end party in the neighbourhood.

An Entomological Section has been formed, and will have chosen its officers, and drawn up its programme by the time these notes appear; any entomologists who have not joined yet are invited to communicate with Dr. F. C. Garrett, South View, Alnmouth.

### WALLIS CLUB.

### INDOOR MEETINGS.

October 22nd.-Members' night. The President, Mr. R. B. Cooke, in the chair. Mr. G. Bennett Gibbs gave us an able paper on the Natural History of the Egyptian hieroglyphics, dealing particularly with the question of the Cerastes, or letter F, sign of the hieroglyphics, as to whether it represented the horned viper or a slug. He brought evidence to prove that the earliest forms of the signs undoubtedly represented the viper; some of the signs, however, of the XVIII Dynasty as purely represented a slug, and so were probably the earliest records or figures we had of this animal. Mr. Gibbs showed a very large number of beautiful drawings he had made of the various sacred animals portrayed in the hieroglyphics. Everyone enjoyed the lecture and the discussion was a lively one. Mr. Bartlett also exhibited two species of the sacred scarab beetle with their dung balls, scarab amulets and lantern slides of the beetle.



November 5th.-Mr. R. B. Cooke in the chair. Dr. H. O. Bull of the Dove Marine Laboratory, Cullercoats, favoured us with a lucid and interesting paper on "The Life of a Fish," profusely illustrated by lantern slides. The life of the Stickleback from egg to maturity was brought before us. We were introduced to the methods by which such knowledge had been attained. Problems and experiments to test the intelligence of fish were briefly discussed, including the Eel problem. The paper was much appreciated.

November 19th.-Members' night. Mr. Cooke (President) in the chair. We had an excellent night with exhibits. Mr. J. W. Watson showed plants with curious fruits, *Senecio tanguticus*, *Cyclanthera explodens* and *Ecballium elaterium*.

Mr. Preston brought a beautiful set of flints and micro-flints from South Africa worked by the Bushmen; Mr. Johnson specimens of the Chestnut Moth; Mr. Temperley rare plants from Teasdale, Greatham and Harbottle; Miss Ritson, Bird's Nest Fungus from East Boldon; Mr. Cooke a series of his exquisite colour photographs of Alpines from New Zealand.

December 3rd.-Mr. R. B. Cooke in the chair. Miss Lomas gave us a most interesting talk on "Bees," showing also a number of lantern slides and combs of honey. A very good discussion followed.

Exhibits: J. W. Watson, *Iris foetidissima*; Mr. Blackburn, *Milax gracilis* from Sunderland; Mr. Nicholson, Death's Head Moth.

December 17th.-Members' night. Mr. R. B. Cooke in the chair. Dr. Blackburn exhibited plants from Ben Laers, Dovedale and Burford-*Saussurea alpina*, *Dipsacus pilosus*, *Astragalus glycyphyllos*. Mr. Temperley brought a Kingfisher's wings, and for comparison the claws of the Kingfisher, Meadow Pipit and Woodpecker; and a series of pressed flowers from the Pennines at Ingleboro', Yorks. Mr. Cooke showed British and Arctic Norway plants to demonstrate contrast in growth- *Vaccinium vitis idaea*, *Andromeda polifolia*.

NATURAL HISTORY SOCIETY OF NORTHUMBERLAND,  
DURHAM AND NEWCASTLE UPON TYNE.

The Autumn Programme of lectures was opened by Mr. G. Bennett Gibbs with a lecture on "Prehistoric Man in Northumbria." By means of a series of maps he traced the settlements of Tardenoisian and Neolithic Man in Northumberland and Durham, following this up by photographs of the many types of flint implements found on the various sites. The lecture by the Rev. A. G. Partridge on " Britain's Most Isolated Possession-Tristan da Cunha" was of great interest. He related his experiences on the island in his capacity as padre and as British Government representative. His description of the island and its people was illustrated by many original photographs. Mr. Partridge has recently presented to the Society two specimens, one mature and the other immature, of the unique and very rare Flightless Rail (*Atlantisia rogersi*), found only upon one of the islands of the Tristan da Cunha group known as the "Inaccessible."

The Christmas holiday lecture to young people was given by Mr. G. W. Temperley; his subject being " Our Neighbours the Birds." He dealt with only those commoner species met with in town gardens and parks. Miss Norah Balls gave the New Year holiday lecture, which took the form of a fascinating talk to children on "Nature's Babies."

The meetings of the Sections have provided very varied programmes. Among the more interesting meetings were Dr. H. M. S. Blair's lecture on "Lapland Revisited" to the Ornithological Section, Mr. J. R. Johnson's exhibition of his unique photographs of the Eggs of Butterflies to the Entomological Section, and Miss M. E. Urton's talk on "Our Local Wild-flowers and Where to Find Them" in the Botanical Section.

On the occasion of the Royal Wedding on November 29th the Hancock Museum, together with other buildings, was "flood-lighted" by the Gas Company. Taking advantage of this unusual publicity, the Society decided to throw open the Museum free of charge during that day. Although this concession was not especially advertised, except by means of a notice attached to the

Museum gates, yet during the space of five hours close upon 5,000 persons passed through the turnstile. In the afternoon the building was so crowded that hundreds of people were turned away. Encouraged by this unexpected display of interest in the Museum, the Council decided to reduce the admission fees to one-half during the Christmas and New Year holiday weeks. This had the effect of considerably increasing the number of visitors, but not to the extent of making the experiment a financial success.

#### DARLINGTON AND TEESDALE NATURALISTS' FIELD CLUB.

Following a series of well-attended excursions held during the summer, the winter lecture season was opened on October 2nd by Mr. A. R. Dickinson, who told of interesting adventures in Spain while leading an international party; his slides of beautiful buildings and hospitable people showed little sign of recent disturbance.

The following week Mr. Brodie described diseases of the potato and incorporated much good advice to growers.

On October 16th "Beetles" in Mr. Lucas' hands proved a most interesting topic, for a great variety were illustrated by slides and the mounted specimens later added to the club's collection.

The tenth report of the phenological observations by Mr. J. B. Nicholson showed how the mild weather had advanced flowering and assisted another heavy crop of wild fruits and an abundance of mushrooms. Mr. Stainthorpe correlated this with the bird life in the district, and Mr. Inness deplored the changeable public taste that leaves plentiful gooseberries unsaleable.

On November 6th Mr. Brown lectured on "The Scientific Study of Soils," interspersing slides that illustrated its formation and its teeming life.

The Darlington librarian lent an epidiascope to illustrate Mr. Watkin's travels in Spain, re-told on November 13th. Roman and Moor had left their mark on the beautiful architecture, while the Spaniards interest yet lies in his agriculture.

"The World of the Lake" was explored for us by Dr. Griffiths on November 20th. Lantern slides explained the climate of the water with its amazing variations in sediment, light, nutrients, aeration and temperature, and their diverse effects on the animal and plant associations to be found therein.

For the first time the club heard of "Doglegs of Durham," when the Rev. W. T. McLean introduced these ancient pathways whose marked stones and names have frequently survived and are fascinating routes to be traced on maps.

The President, Mr. Nowers, arranged a microscopical evening on December 4<sup>th</sup>, to display a variety of the contents of local ponds.

Mr. Tompkins incorporated great local interest in his lecture on "The Commercial Minerals of the North," where well-known families have for centuries developed workings of coal, ironstone, limestone, alum, whinstone, salt and lead. Most of the minerals were displayed from the club's rich collection, gathered by many geologists in the past and recently enlarged by gifts from Mr. R. Lucas and the late Mr. C. O. D. Gibson.

On December 18th Mr. H. Thompson greatly interested gardeners during his lecture on "Plant Foods," explaining the effect of different essential minerals on the growth of crops, illustrating this profusely with pictures and diagrams.

The new year opened with "A Tour Round the Oxford Colleges," Mr. J. R. Ellis being the guide whose interest in past history and tradition is linked with a lively picture of its present scholarship, sporting and social activities. On this, as on many other occasions, Mr. Nichols' skill in the preparation of lantern slides added greatly to the enjoyment of the lecture.

## NOTES AND RECORDS.

### NOTES.

#### **Sparrows and the Yellow Underwing Moth (*Triphaena pronuba*).**

As I was watching the flight of certain Small Copper Butterflies in September, an example of the Common Yellow Underwing flew past, followed by a sparrow. The moth was lucky enough to find refuge on a crossbar supporting a small erection devoted to billposting. When this occurred, I

naturally expected that the bird would desist in its attacks. However, it flew repeatedly at the insect, attempting to pick it off with its beak. I was unable to make sure that it succeeded in its attacks.-J. W. HESLOP HARRISON

#### **Larvae of the Small Copper Butterfly (*Chrysophanus phlaeas*).**

For many years, in spite of very careful search, all attempts made by Mr. J. R. Johnson and myself to find larvae of this beautiful butterfly have always ended in failure. Late in September, however, last year, I found an isolated plant of *Rumex acetosella* carrying nearly a score of eggs of the butterfly, as well as several larvae. These larvae varied in size and were ploughing furrows on the underside of the leaves. Some were certainly half grown.-J. W. H. H.

#### **Butterflies and Veronicas.**

Although our local stock of Red Admirals was comparatively small this season, quite a number of individuals put in an appearance in the garden. As usual, we looked for them to visit the Buddleias. Strangely enough, these generally attractive flowers for once seemed to lose their attraction, for most of the Vanessids were to be found on the flowers of one of the shrubby New Zealand Veronicas. The same plant, too, was the haunt of the two common Whites, as well as of the Small Copper.-J. W. H. H.

#### **Early Spring Larvae.**

On January 10th, as the night, although windy, seemed otherwise suitable, I went out with the lantern in search of spring caterpillars. These were not rare, but I only took three species, the Common Yellow Under-wing (*Triphaena pronuba*) the Small Yellow Under-wing (*Triphaena comes*) and the Cloud-bordered Brindle (*Xylophasia rurea*). The last named insect used to be very common locally, but had recently not been seen.-JACK HESLOP HARRISON.

#### **Hybrid Moths**

As I have stated previously my work with hybrids in the genus *Oporabia* has been speeded up during the last few years. In 1933 I brought about a pairing between a female (*O. nebulata* female X *O. christyi* male) and male *O. autumnata*. Very few eggs hatched but, in spite of that, I succeeded in breeding two moths of the parentage indicated. This is the second trispecific hybrid I have produced in the genus for I have insects involving *O. filigrammaria*, *O. autumnata* and *O. nebulata*. Of more ordinary hybrids I have for the first time secured a cross between *O. christyi* female and *O. nebulata* male.-J. H. H. H.

#### **A New Geometrid Species.**

During 1933 I investigated the cytology of the moths of the genus *Thera*. To my surprise I found that genuine *Thera variata* from the New Forest had a haploid chromosome number of 19 whilst equally certain *T. obeliscata* from Shull, Durham, had 13. I therefore pursued the matter further by examining preparations of what were considered to be larvae of *T. obeliscata* beaten from Scots Pine in Diplon Woods, Northumberland. These larvae

were found to yield two chromosome numbers 13 and 18 respectively. The former clearly agreed with *T. obeliscata* whilst the latter diverges from that of *T. variata*. Moreover, the imagines bred from the larval approach much more nearly to *T. obeliscata*.

This note is published in order to stimulate research in other parts country. In the meantime the new form is supplied with the name *alternata*, the character serving at present to differentiate it from *T. obeliscata* being its chromosome number.-J. W. HESLOP HARRISON.

#### **The Stinking Groundsel in Durbam.**

In the last number of *The Vasculum* Mr. A. Robinson records a single example of *Senecio viscosus* from the Consett area. As far as I know in most places in Durham on railway banks, on pit heaps, and on slag heaps, this plant is exceptionally common, often far exceeding the Common Groundsel in numbers.-J. W. H. H.

#### **Early Flowering of the Coltsfoot.**

This plant was in full flower on the Target Heap at Birtley during Christmas week, one of the earliest dates I can record for other than casual flowers.-J. W. H. H.

#### **British Orthoptera.**

The Orthoptera of the north of England have been sadly neglected, and information, records and other material that would help to the completion of a modern handbook of our British Orthoptera would be gratefully received. There are some definite problems. For instance, does the true *Acrydium* (formerly *Tettix*) *bipunctatum* of Linnaeus really occur in these islands? How many of our *Tettigoniidae* that is, long-horned grasshoppers, reach our northern counties? *Acrydium* is adult in the early summer: it is abundant on muddy banks of lakes and in marches, on dry, barren ground; it is best caught by sweeping; coleopterists please note. Material will be thankfully received by: MALCOLM BURR, D.Sc., United University Club, Pall Mall East, London, S.W. 1.

[The only long-horned grasshopper I have noticed in Northumberland is that at present known as *Acrydium bipunctatum* L. I have specimens from Allendale taken while searching for Arachnida on the west bank of the river just at the junction of the East and West Allen. Dr. Burr's "dry, barren ground very aptly describes the spot. I think I can safely say that this (about 600 feet) is its upward limit in West Allendale, for all such stretches on the West Allen were closely searched for many years.- J. E. HULL.]

#### **The Harvest Bug.**

This elusive but titillating creature is being dragged into prominence by the issue of a questionnaire from Oxford. I have been asked to give particulars as to its range in Northumberland because it is supposed to fall within the scope of my studies. In the popular sense the "Harvest Bug" or "Berry-bug" is practically ubiquitous, though it thins out as you ascend the hills. This, be it understood, is an *inference* only, drawn from bites inflicted, not from observation of the biter. Acarologists universally identify the culprit

with the larval mite described over a century ago by Shaw as *Leptus autumnalis*; but, no two of repute agree as to the identity of Shaw's mite. And why should we suppose that Shaw-alone of all men-was able to detect the veritable Harvest Bug? Linnaeus, like most ordinary people of to-day, identified it with the common money-spinner (*Anystis baccharum*, quite a different beast). None of the four species which our best acarologists have identified with Shaw's *autumnalis* is a tormentor of human flesh, neither does their distribution agree with that of the Harvest Bug-except perhaps that of Dr. Johnstone which has been proved to have no liking for human blood, and would certainly be detected if it ever attacked the human skin.- J. E. HULL.

#### RECORDS.

#### MOLLUSCA.

- Milax gracilis** Leydig. 66  
Near Sunderland.-R. C.
- Limax flavus** L. 66  
Bishop Auckland.-J. G.
- Helicella heripensis (gigaxii)** Mab. 66, 67, 68  
On the cliffs South Shields (R. L.), at Howick (P.) at Dilston (P. B.).
- Pisidium pulchellum** Jenyns. 66,67,68  
At Kimmerr Lough (P. B. and O.), at Greenlee (P. B. and P.) at East Boldon (P. B. and G. T.).

#### REVIEWS.

**The Complete Book of British Butterflies.** By F. W. Frohawk, F.R.E.S., M.B.O.U. 384 pages, 32 colour plates and 160 sketches from life. (Publishers, Ward Lock & Co., Ltd., London.)

As one would naturally expect from the name of its author, this is a well illustrated and interesting book which, although obviously intended for beginners, is far from a slavish imitation of "Newman's Butterflies." As a sort of introduction, we may have a series of essays: "Aberration and Protective Resemblance," "Migration of Butterflies," "Hints on Collecting," and "Rearing Butterflies," followed by a list of the food plants of the larvae. In general, these remarks are of considerable value although we think most readers will find a difficulty in grasping the meaning of the last three paragraphs of the first essay.

Next follows the general text in which we find a novelty introduced in the nomenclature, in that it is based on the Check List of British Rhopalocera, published last year by the Royal Entomological Society. By this procedure the author has taken a step which can only assist in a long overdue stabilising of names.

In his treatment of the various species, instead of relying on the copied and recopied statements of others, cluttered with the accumulated errors of centuries, many of the most valuable and interesting observations result from the author's work to which he has devoted so many long years.

The illustrations, too, are from his own drawings, some appearing on coloured plates and others as text figures. In many cases, several figures of the same butterfly are given to portray the two sexes, the undersides and aberrations. In the same way, drawings of eggs, larvae and pupae are introduced. Most of these can only be described as excellent: we fear, however, that a beginner will find it difficult to determine his species from the figures of the full grown larvae.

Whilst the book is, on the whole, up to date, there are certain irritating defects due to the author's failure to notice work both of earlier and recent investigators. We still see it stated that *Plebejus argus* occurs in Durham, *Erebia aethiops* is still "met with" in the same county (although there is no reference to its detection in Northumberland), *Argynnis aglaia* "in Scotland is mostly confined to the mainland but it has occurred in Skye" whereas the facts are that it is common in Skye, Barra, Raasay, South Rona, Mull, and has been taken in Canna, and so with similar facts.

If a future edition of the book should prove necessary, we hope that many recurrent spelling errors will be corrected; for instance, "polychlorus" frequently replaces "polychloros," "aurinea" appears for "aurinia," "Cardamines" (in the name of the plant *Cardamine pratensis*) for "Cardamine," "armericia" for "armoracia," etc.

Similarly, too, it would be well to give the list of food plants on modern lines. *Viola canina* as the food plant of various Argynnidids will not do: we doubt greatly whether any *Viola* other than *V. riviniana* plays that part with us. In any case, only rarely can genuine *V. canina* be utilised. Similarly *Orobis tuberosus* for *Lathyrus montanus* is quite unacceptable, as is also *Prunus communis* for *Prunus spinosa*.

However, in the eyes of our local workers, the greatest defect of the work is its treatment of the Brown Argus (*Aricia agestis*). The work of Carter and others has been of no avail: ab. *salmacis* is still a "well defined local race .... occurring in the Northern Counties of England" and "unknown on the Continent." As a matter of fact, neither the definition of *salmacis*, nor the statements just copied can stand. Frohawk has described ab. *albiammulata* as ab. *salmacis*, and that aberration, as has been repeatedly pointed out, occurs practically throughout the range of the species. Again Carter and Harrison have indicated in many papers that our Northern populations are mixed and show insects of every facies from type *agestis* to extreme *artaxerxes*. Of his general treatment of the variation of the insect, the less said the better.

Further, he seems unacquainted with the fact that whilst it may be true that *agestis* lays its eggs on the lower side of the rock rose leaves in the south, in the north and in Scotland the upper side is invariably chosen.



Turning now to matters for which Frohawk is not responsible, we would urge that in many ways the typography is displeasing. In addition to what seems to us an unfortunate choice of type, some pages are very disagreeable to the eye; even the ink produces an unpleasant grey-brown sensation.

However, in spite of the criticisms just made, we can strongly recommend the book as well worth the money. It is distinctly useful, fresh and stimulating, and can only do good to our favourite study.

AURILIAN.

**The Irish Naturalists' Journal:** November, 1934 (Vol. v, No. 6).

This is a special "Quaternary Research" number which includes five well illustrated papers concerning the work done in the investigation of Irish peat deposits begun last summer. Dr. Lloyd Praeger contributes an introductory paper setting forth the inception and purpose of the project. He is to be congratulated on the ultimate success of his endeavours to get the work in hand, and especially in securing the personal co-operation of Professor Knud Jessen whose knowledge and experience of work done already on the continent will be invaluable, ensuring the best possible comparison with results obtained in Northern Europe. Mr. C. Blake Whelan makes an interesting incursion into Irish Prehistory by means of pollen-analysis, and Dr. Mahr takes the older route of the orthodox archaeologist. In a sixth paper Dr. J. G. D. Clark adds to these Irish activities a summary of similar operations in the fen district of England during 1934.

Here is also the conclusion of Mr. C. B. Moffatts exposition of his theory that it is a more or less general rule that a pair of breeding birds take and hold a definite territory from which others of the same species are excluded. He carries it on to the corollary that the song of the male bird has no reference to his partner but is a proclamation of his right of possession and a warning to intruders. This implies, of course, that the territorial claim is limited to the period during which the male bird is in song, though the author does not say so.

**Quest for Birds. The Problems and Pleasures of an English Bird-Watcher.**

By W. K. Richmond. (Witherby.) 7s. 6d.

Judging by the present-day profusion of shop displays of Bird Feeding Tables and Nesting Boxes, the number of people interested in Birds must be increasing rapidly, and it is to be hoped that very many of those in whom this interest is developing will be fortunate enough to read this book, which is quite unique in its variety of subject. To those who are already Ornithologists, it will, with its freshness of view-point, outspokenness, and power of description, be doubly attractive.

In his Preface Mr. Richmond tells us that "the vast majority of on Birds fall readily into two classes-those which are intended informative, and those which are calculated largely for pleasure." The

same classification could be applied to the chapters of his book, but here the analogy ceases, for carrying the quotation further, Mr. Richmond says "the trouble with most of them is that the authoritative books are painfully uninteresting." Now whether this be true or not of authoritative books, it certainly is not the case with Mr. Richmond's chapters which come under this heading. They are always interesting, and when critical, which is not seldom, are backed by reasonable argument. Mr. Richmond is no crank, and while we may not agree with all his views, he is always entitled to respect.

Of particular interest to readers of *The Vasculum* will be his chapters entitled "A Northumbrian Bird Sanctuary" and "Past and Present." The former deals with Gosforth Park in particular, and with the advantages and shortcomings of Bird Sanctuaries in general. He finds Gosforth Park of greater interest in winter than in summer, due of course to the varying numbers and species of Duck which then frequent the lake, and as a result of four years watching, he shows something of the migratory movements which can be traced by regular observation. Then there are those rare occasions when some longed for sight gladdens the eye—it may be a Rough Legged Buzzard, or a Montagu's Harrier. Quite surprising to many will be the fact that Water-Rails may often be heard, and, if one is fortunate, seen here. Mr. Richmond incidentally mentions his discovery of the Sanctuary "while trespassing," and for the benefit of any who may wish to follow in his footsteps, I would mention that for a very small subscription payable to the Secretary at the Hancock Museum, anyone who undertakes to respect the conditions of Membership, may obtain a 12 months' permit to visit the Sanctuary.

The chapter concludes with an appeal to serious-minded Ornithologists to study the problem of the Protection of Birds, but more than this is required and until our Government realises its responsibilities in the matter and treats indiscriminate shooters and collectors of rare birds' eggs as they deserve to be treated, we in this Country will never possess the wealth of bird life we are justly and by nature entitled to.

In "Past and Present" we are told of the varied Bird Life of Teesmouth to-day, and as it was in the past. This spot must surely still be one of the most interesting Bird Haunts on the East Coast, where at any moment some unexpected rarity may turn up.

The chapter on the Territory Theory and its Fallacies is of a very different character. In it Mr. Richmond demolishes the food value theory of Territory, a theory which, one might add, is declining in popularity. He admits he has no explanation of Territory to offer, in fact on this subject he goes so far as to say "but then why have a theory of Bird-Life at all?" This I think is a pity, for no-one will deny that Territory is a factor in the life history of many birds; it is certainly an interesting problem and I feel that if Mr. Richmond would give further time to the study of this subject he might be able to produce some constructive views on the matter. I say this with some justification for he himself says later in

his Book " ... every Ornithologist should endeavour to combine both field-work and indoor study so that he may be able to form an intelligent opinion upon the various mysteries which the study of Birds continually presents."

There is much of interest in the chapter on the Instinct Intelligence and Character of Birds. Without being unduly anthropomorphic, Mr. Richmond credits them with a degree of intelligence, and while many will not go as far as he does in their views, no-one who has a Bird Table can but agree that birds have character; as he says, "some are more timid than others, others vindictive, others less sociable, some more intelligent, others more curious." In other words Birds are not mere automata as some writers would have us believe.

Another interesting chapter is devoted to Bird Song. Mr. Richmond does not agree that spring song is entirely connected with territory. He had broader ideas and after reading what he has to say, few will quarrel with him when he writes "one thing is certain and that is that Birds like singing, and derive much pleasure and satisfaction from it."

As a descriptive writer Mr. Richmond compares with the best, and combining as he does, powers of observation of a very high order with this gift of writing, it is not surprising that the best chapters in the book are those which, to return to our analogy, are "calculated to give pleasure." These include "Seen in an Essex Estuary," "Merely a Sewage Farm," "Frost," and best of all "On Seeing New Birds." Although appearing early in the book, readers should keep this chapter till the end, and after reading the more contentious matter, taking perhaps one side or the other, be finally reminded that after all it is the bird itself, and especially the thrill of the sight of a new Bird, which counts most.

This book should find its way on to the shelves of every Bird Lover's Library.

H. TULLY.

#### NOTICE.

Back numbers of *The Vasculum* are running short in supply, two in fact are out of print. Subscribers desiring to complete sets, or to replace any missing numbers are urged to make early application. Apply to WILLIAM CARTER, 13, Kimberley Gardens, Newcastle-on-Tyne, 2, who will also be pleased to receive subscriptions for Vol. XXI, which were due on January 1st.

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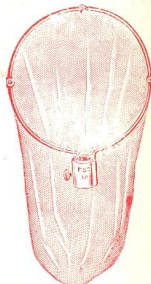
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# The Vasculum

The North Country Quarterly  
of Science and Local History.

EDITED BY THE REV. J. E. HULL, M.A., D.Sc., BELFORD VICARAGE,  
NORTHUMBERLAND.

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TO LET.

# THE VASCULUM

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THE LATE W. RAW.

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## THE REMAINS OF ROMAN PIERCEBRIDGE.

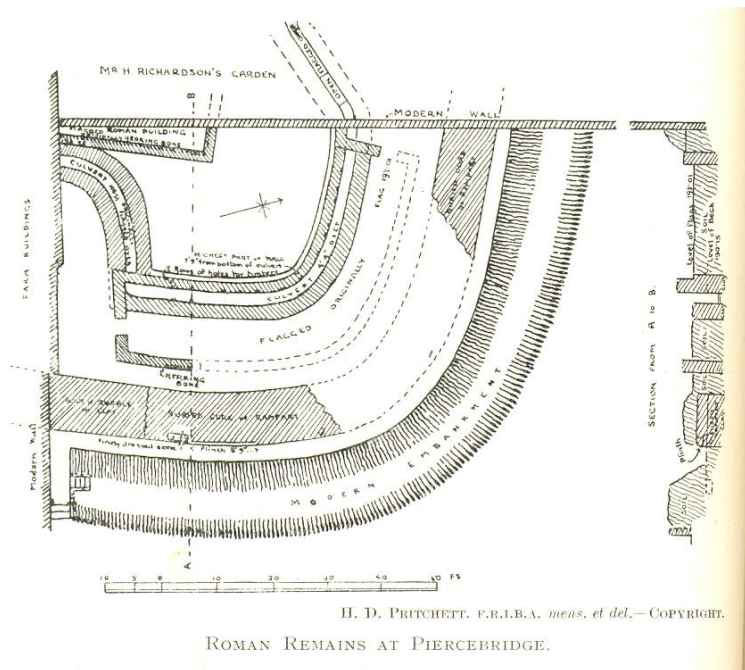
H. D. PRITCHETT, F.R.I.B.A.

This important walled camp on the north bank of the river Tees in the county of Durham, and in the angle formed by the road through the village leading to the bridge and the road to Barnard Castle, has long been known to archaeologists as far back as Camden, 1551-1623. The Watling Street or Dere Street, running from Catterick to Binchester and beyond, ran a little to the east of the camp and crossed the river by a bridge, some remains of its foundations still existing. The village, with trifling exceptions, stands inside the grass-covered walls or ramparts, lending itself to the belief that they existed for a considerable time after the station was abandoned and to a fair height. In 1642 there was a skirmish at the present bridge between Royalists and Roundheads when the former mounted their heavy artillery on the southern rampart, so commanding the bridge. The camp, comprising about 10 acres, was an important strategic point on the Tees. There is uncertainty as to the true name of the camp, which is generally assumed to be Magae or Magis, but the late Prebendary Scarth, F.S.A., in the course of a lecture on Roman work given before the British Archaeological Society in 1887, was inclined to regard it as "Dictis," as Magis being one of the names on the Rudge Cup\* would lead one to place it with the stations on the line of the "Wall." There have been several finds here in the past, viz. the Bellinus Stone, an idol, a brass bust, a gold thumb ring, many coins, and most interesting of all, a bronze figure of a ploughman with his team of oxen. If the station was systematically excavated there would be found a wealth of remains, but this would be difficult matter owing to the houses; and it would mean the digging up of the village green which no doubt covers the Pretorium. Early in 1933, however, Mr. C. F. Dixon, who is keenly interested

\* This cup is a small enamelled bronze bowl about 3 inches high and 4 in diameter. It was found in 1725 at Rudge near Froxfield, Wiltshire. There is a moulded pattern round it which appears to represent the Roman Wall and round the rim are the names of some of the stations there. This cup is in the possession of the Duke of Northumberland.

In Roman remains-and to whom great credit is due-on his own initiative started excavating on the river bank to find the abutment of the bridge on the Durham Side. He was not successful in finding it, as there is little doubt that it had been robbed to build the weir for the mill across the river. However, he was successful in tracing the length of Roman road connecting up the line of bridge and the road from Binchester across the field called the Tofts. This was plainly visible owing to the drought. Two sections were cut across this and the construction carefully recorded. The road was 5 feet thick and 15 feet wide and cambered. Aligning this road with the river, he discovered, owing to the low state of the water, the original oak piles in the bed of the stream upon which the three piers of the bridge had been built. This made five spans. Some of the angular masonry, presumably cutwaters, are still in the river. Mr. Dixon made most careful measured and figured drawings of these. These piers were standing, or partly so, till 1771, when one of those most terrific floods which washed away most of the bridges in the north of England, swept it away, leaving only the piles. There is little doubt that Piercebridge, or more anciently, Piersbridge, got its name from this bridge of piers. There is nothing to justify the theory that the present bridge was built by priests and that the name of the village so originated. Large numbers of coins called Toft pennies have been picked up in this field. A Roman grave was also re-discovered on the river bank about sixty yards below the present bridge. It was formed of freestone slabs and contained human bones, portions of a glass tear bottle, remains of a lead casket and a quantity of iron nails. There is clear evidence that it had been previously rifled. The tear bottle has been carefully pieced together by Mr. J. E. Hodgkin and is now in the Bowes Museum. It is said that there are also numerous burials in this field. As early as 1915 Mr. Harry Richardson, whose garden is situated at the north-east corner of the camp, unearthed a masonry paved culvert, flagged over. This gentleman is keenly interested in the Work and it is largely owing to him that a large quantity of broken pottery has been collected and scheduled. Mr. J. E. Hodgkin has also largely interested himself in the work. By the permission of Lord Barnard, the landlord of the adjoining

land, and the tenant, Mr. Cathrick, Mr. Dixon started excavation at the north-east corner in 1934 and followed up the course of the culvert or conduit of similar construction. As will be seen from the plan by the writer, it follows the curved line of the rampart. It is nominally 2 feet wide with walls 3 feet thick. It has not been flagged over inside the long building. It falls slightly from the west to the south. Dr. Hunter, 1675-1757, said, " the brook



(Dyance) supplied the ditch of the fortress with water and also the garrison by an aquaduct firmly arched at the top so as to bear the public road till 1730 when some coal draughts penetrated through it, discovering the cavity above a yard wide and a yard and a quarter deep." He also records the discovery of a Roman bath on the site of the camp in 1730, about 180 feet from the east wall and 240 feet from the south wall in a garden. There are

traces of a dam in the beck or brook and watercourses, and from levels taken by the present writer about the point in the stream leaves the so-called aquaduct was supposed to cross the road to Barnard Castle there is a fall to the excavated culvert of eighteen inches. It is uncertain whether the conduit directly fed the bath and supplied the garrison, or whether it was for flushing the latrines. If the two former it could not flush the latrines. Appearances seem to favour the latter theory as the west wall of the culvert is much higher than the east one, as if it supported a lean-to roof, and in the west wall are mortice holes for timbers as if for seats.

An engineer friend suggested that the aquaduct might have had its flow divided so as to act for both purposes. This culvert inside the long narrow building has not been flagged over. The floor of this building was covered with a thick layer of fine ashes. The culvert, instead of following the straight line of the ramparts, takes an almost right-angle turn. It is arched over twice where walls cross it. The masonry is of rubble, not of a very first-class quality. Besides the uncovering of the culvert, etc., the rampart wall was laid bare. It is ten feet thick at the base and is reduced inside by sets off. The masonry is of a much superior character to the walls of other buildings. A small portion of a splayed plinth is remaining and the wall stones are of a good size and have the typical Roman broaching. The rampart has been breached at the south end, and filled in again in a rough manner with rubble and clay. Probably this has been done in later times when the farm buildings were built. At the south-west corner there are remains of a building which was flagged at one time. It has some herring-bone masonry in its walls. The camp was of a rectangular or later type, the earlier form being square. It has rounded corners. Whether there was ever a fort here in Agricola's days is impossible of proof. Some think there are signs of reconstruction work. It is extremely likely that this was the case as Piercebridge may have suffered from the great irruption of the Calidonians in the reign of Septimius Severus, A.D. 193-211. It is known that the Roman governor Lucius Alfenius Senecio. attempted to buy off these foes, but without avail. As he was unable to meet this great disaster, he applied in A.D. 208 to the

Emperor Severus for assistance. This brought the latter to Britain. Senecio not only did repairs to the Roman Wall, but did work as far as Bainbridge in Wensleydale. It is extremely interesting to know that his name is inscribed on a large stone slab dug up at Bowes and now in the church there.

There have been numerous finds in the excavations. Pottery of Samian, Castor and Upchurch make, bone pins, bronze spoon fibulae, bracelets, rings, jet dice and pins, iron objects, keys, counters, roofing tiles, stone slates with the nails still in the two altars, the larger without inscription, and a very small soap stone one, and coins dating from a little before A.D. 161 to late as Valentinianus I., A.D. 364-375. As it would prove a costly job to cart away all the soil covering the ruins, it was decided to form a bank outside the ramparts. This has been done. A small museum has been established in the village for the less valuable finds, but those of note are to find a home in the Bowes Museum at Barnard Castle. It greatly depends on how funds come in (at present depleted) as to whether any further work be undertaken at the north-west corner where walls probably five or six feet high are buried. The cost up to the present has been close on £143, raised by small grants, private subscriptions and a collecting-box.

The committee consists of the Lords Barnard and Zetland Mr. J. E. Hodgkin, F.S.A., chairman, Mr. G. H. Richardson honorary secretary and treasurer, and Messrs. J. H. Pease, S. Harrison, R. H. Sargent, H. D. Pritchett, F.R.L.B.A., Philip Corder, M.A., F.S.A., Eric Birley, M.A., F.S.A., and Major Rudyard.

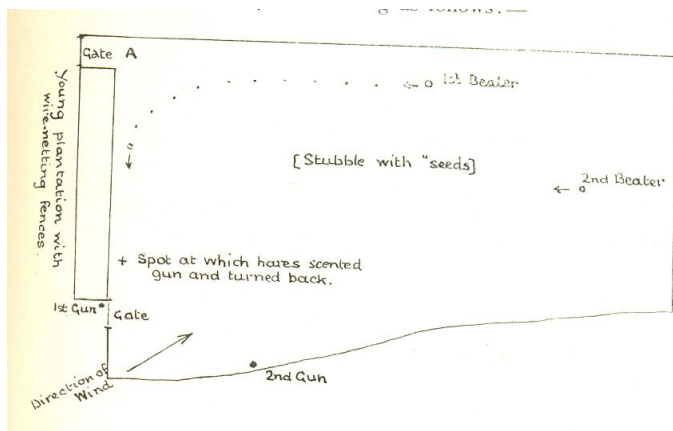
Great credit is due to Mr. C. F. Dixon for the way he has carried out the excavations, much of it unaided, and for excellent plans of the road and river piles.

## THE POWER OF SCENT.

J. M. CRASTER.

An example of the scenting power of the hare may be of interest.

A small hare drive was arranged, with no preparation before- hand, the general "lay-out" being as follows:



The first gun was completely hidden behind the gate-post and the corner of the plantation; the second gun (the writer) was in "dead" ground when crouching. Two hares were raised in succession by beater No. 2; beater No. 1, being ahead, turned them from the gate A, so that they ran down the side of the covert towards the gun. Each hare, at about 3 minutes apart, stopped abruptly at approximately 70 yards from the first gun, turned round and cantered back. The second one was again turned by the beater and was killed by gun No. 2, but would not face gun No. 1.

Two points of interest arise: -(1) the distance at which gun No. 1 was scented, although he was not smoking, and was standing still; (2) the fact that in each case the hares stopped before they

had reached the place at which one would have thought the scent should have been. Did the human scent travel in the shelter of the plantation at a different angle to the actual wind direction?

Two further anecdotes may be given, one showing the power of scent of a weasel, and the other the apparent absence of this power in a pheasant. One winter day, frosty with a light north-west wind, I was sitting with my back to a fieldside bank when a weasel was seen working down the bank towards me from due west. I kept motionless, but at a distance of about six yards I was seen. The very fact that I did not move at all puzzled the little hunter. Several times at different spots, but never at a greater distance than 4 yards, he sat up and "begged" to get a better look over the grass; still remaining apparently puzzled but unalarmed. Then he went round to the other side, suddenly got my wind, and was underground like a flash!

The encounter with the pheasant was as follows : -One March evening I was sitting, in the same attitude as related above, but waiting for a pair of Corbies to come in to roost. The evening was still with a light westerly breeze, and sound travelled unusually well. Presently, mixed with the sound of rooks settling down to roost, peewits "spring-calling" as they tumbled in the sky, snipe drumming and partridges saying good-night, I heard a curious kind of "cockling" noise. Turning my head cautiously to the left (or southward) I saw a cock pheasant walking along the edge of the bank towards me. He was at least 100 yards away, walking very slowly, and apparently talking to himself; presumably trying to decide in his own mind which tree in the clump would best suit him that night! He came nearer and nearer, every few yards "cockling" as it were under his breath, until he presently actually walked behind me, when he was so near that I could have touched him; and at this moment the westerly wind blew direct from me to the bird. Obviously my scent gave him no warning whatever; and it was not till I turned my head and looked at him, when he had passed me and was about five yards beyond, that he had any idea that things were not as they should be. For one horrorstruck moment he gazed at me, then uttered a terrific crow and flew away.

## THE WINCH HERBARIUM-BRYOPHYTA.

J. B. DUNCAN.

This old collection of mosses and hepatics in the Hancock Museum is a small one and the proportion of local plants is not large. While the value of these is often lost through lack of definite particulars of locality and date.

In the process of overhauling the material, for the purpose of preserving what might be of sufficient interest and suitable for inclusion in the general collection at the Museum, some doubtful records in Winch's "Flora of Northumberland and Durham" (*Trans. Nat. Hist. Society of Northumberland, Durham and Newcastle-on-Tyne*, Vol. 11, Pt. I, (832) have been definitely cleared up as errors. On the other hand, one or two specimens wrongly determined prove, when corrected, to be new vice-comital records.

### *Records definitely erroneous.*

#### WINCH'S RECORD.

*Dicranum polycarpum*  
*Orthotrichum Hutchinsiae*  
*Hypnum silesianum*  
*Jungermannia concinnata*  
*Jungermannia curvifolia*  
*Jungermannia obtusifolia*  
*Jungermannia cochleariformis*

Northumb.  
 Durham.  
 Durham.  
 Durham.  
 Durham.  
 Northumb.  
 Durham.

#### CORRECT IDENTIFICATION.

*Cynodontium Bruntoni*.  
*Ulotia Bruchii*.  
*Plagiothecium denticulatum*.  
*Gymnomitrium obtusum*.  
*Cephalozia media*.  
*Scapania curta*.  
*Scapania dentata*.

Many other specimens were found to be incorrectly named, but for these authentic records are also available.

The following are new vice-comital records and were wrongly named in the Herbarium

<i>Campylopus brevipilus</i>	Prestwick Carr	v.c. 67.
<i>Grimmia decipiens</i>	Cauldron Snout	v.c. 66.
<i>Campylopus nitens</i>	East Common Wood, near Hexham	v.c. 67.
<i>Gymnomitrium obtusum</i>	Cauldron Snout	v.c. 66.

The nomenclature used was easily unravelled and no difficulty experienced on that account.



## SOME PENNINE WEATHER RECORDS OF THE 19th CENTURY.

A. RAISTRICK, Ph.D.

In examining the Minute Books of the Governor and Company for Smelting down Lead with Pitcoal and Seacoal (better known as the London Lead Co.), a number of minutes were copied which note exceptional weather conditions in Alston Moor and Teesdale, in the period between 1820 and 1870. These appear of sufficiently general interest to merit record in *The Vasculum*, where the information will be more available to those interested, than if left in the minute books.

1820. Jan. 24.-The most intense frost known for years.

1822. Mar. 4.-Great floods in Westmorland, washed away all our bridges.

1823. Feb. 8.-Most severe frost and snow. Lasts till Mar. 10th.

1825. Oct. 18.-The most unprecedented drought, commenced at the beginning of September, and continues.

1825. Nov. 15.-A heavy snow storm. Most adverse season we have ever known.

1830. June 7.-Floods, very heavy, particularly at Skeepers.

1836. Oct. 31 .-Severe snow storms occasioning extreme difficulties (continued at intervals to 17th April, 1837).

1838. Apr. 16.-Unusual severity of last winter noted.

1840. Sept. 22.-Exceptional snow storm.

1846-47.-Floods cause exceptional damage to bridges, washing floors, etc., this winter.

1855. Feb. 13.-Heavy fall of snow after extremely severe season.

1855. July 24.-Severe thunder storm and flood causes much damage over the whole district.

1859.-Continued spell of very dry weather has hampered mining and ore-dressing operations for some time.

1859. Nov. 1 to 1860, Feb. 8.-Season of intense snow, rain, and long frosts, which have stopped ore-dressing and other mine works.

1861. Feb. to June.-Extensive drought in Teesdale.

1865. Oct. 30.-Extraordinary fall of snow in Alston Moor.

1868.-A year of extreme drought, greatly reducing the work of the mines.

One might add a note in explanation of some of the above notices; the Company worked numerous mining leases in Nent Head and Garrigill, all parts of Teesdale, Lunedale, and the Hilton and Dufton Fell areas of Westmorland. The general practice of the Company was to use water-power for crushing and treating their ores, and also for driving ventilating machinery at most of their mines. Drought was immediately felt in the loss of power for their wheels, and in reduced power for ventilation. The ore-dressing and washing was carried out on open floors at the mine sites and also at special washing floors, and in both cases, severe frost or heavy snow was fatal to continuance of the normal work. As the Company had such widespread leases, they built and maintained a very great mileage of roads and a fair number of bridges, hence great floods were soon notified in damage to roads and bridges and dislocation of the work of the remoter mines.

The Company was formed in 1692 with mines in Nent Head district, and operated until 1905, but though the Court Minute books for the whole period are preserved, it is only during the period 1820 to 1870 that we have specific minuting of weather conditions as such. With further work, however, it should be possible sooner or later to extend these notes backward to the beginning of the 18th century.

The actual dates recorded in the minutes may be a few days different from the actual event, as the date quoted is that of the letter notifying the secretary of the Company of the event, for Inclusion in the agenda of the next Court meeting. Other evidence shows that there was an almost daily correspondence between the district agents and the head offices, so it is probable that all dates are within at most one or two days of the actual occurrence.

## ENGLAND BEYOND THE TWEED.

### Its Places and Place-names.

#### II.

J. E. HULL.

ORRET.-A subsidiary fishery at the west end of Broad. The name must be derived from O. E. *oretan*, to destroy or spoil, with a possible reference to the spoiling of the fishery by the change in the course of the river.

PAXHOLE.--Otherwise Packshole, Pakeshole. Apparently the way out for packhorses from the quay.

PETTCAR LOUGH.-The lough above New East Farm, dammed up and enlarged to supply Berwick with water. The "water-gate" ran parallel to the North Road along the slope above Loughend, Conundrum, and East Hope, to the "cistern" on the Calphill. *Petticar* would seem to be Celtic, but I have no evidence as to its meaning.

POOL.-A fishery on the south side immediately above the Border Bridge. The O.E. word was *pol*, used in a special sense for parts of a tidal river noticeably affected at high water.

PORTERHAUGH.-The haugh by the Whitadder on which the New Mill was built; before 1604 a perquisite of the officer in charge of the town gates.

RAVENDALE (or Ravensdale).-The Chapel opposite the old Bridgegate belonging to the Trinity Friars of the Domus Pontis or Bridge Hospital. Evidently a name borrowed from some other place or from the name of some benefactor.

RAVENSDown.-The name in its earliest form as preserved in the Dryburgh chartulary of the 12th century was *Revenysden*. In the same century a Coldstream record makes it less correctly *Ravinisden*. It is clear that the terminal *-den* (O.E. *denu*, a dene) is a mistake, and that the *-don* or *-down* which has survived is correct; for there is no dene, and there certainly is a hill or rising ground such as is indicated by *don* or *down*. *Revenys* seems to

be O.E. *hrefnes* (*hreofnes*), leprosy, *hrefe* being a leper. It may further be noted that in the Elizabethan survey Ravensdowne is called the upper part of Rotten Row, and it is that part therefore which is to be regarded as "leprosy hill." Probably in the 12th and 13th centuries the path to the Magdalen Hospital began at this hill, and that here was the limit beyond which the lepers might not pass towards the town.

Other names applied to this street are Rotten Row, Back Way, and Wallis Grene. The last means the "pasture next the wall," and really belongs to the time when there was a broad open grassy space between the town and its protecting walls on the north and east; but "Ravensdowne *alias* Wallis Grene" occurs as late as 1568-i.e., after the new walls were built. It should be observed that though it boasts so many names, this is the only street in old Berwick which was never called a gate or lane (unless it is supposed to be the ancient Cissergate; for David Scissor had houses here in the 12th century).

Rotten Row is to be found in most Scottish towns and in many English; usually, I believe, more or less remote from the places of business. That was inevitable, because originally a "row," whether in town or country, was a series of dwellings erected casually along the line of some subsidiary road or track. Many attempts have been made to explain the word "Rotten," but it is generally regarded as an unsolved problem. It was, however, a word of Norman times; not native, because it was soon disused and forgotten, frequently being displaced by the M.E. *ratoun* or *ratten*, a rat. These things considered, I think it must have been the O.Fr. *rotine*, a bridle-path.

REDHEUGH.-The name of this fishery appears in the Kelso chartulary (12th century) as Redehov, Redhouth, etc., and it is said to be "*inter Pool pisc. scil. de Orde et pisc. de blakewel*." The fishery, like its neighbour Woodhorn Stell, was evidently named from the estate to which it was attached. The low cliff between the town and the pier was also called Redheugh.

REEDSIDE.\_On the western slopes of Halidon Hill, perhaps where the old red sandstone crops out north of Sanson Seal.

RIPPETH'S FIELDS.-So called in the vernacular. Redpath or Ridpath was the first lessee when this part of the old common sheep pasture was enclosed. It is the south end of the common land once known as the East Field, extending from the Magdalen Fields and the Mayor's Batt to Marshall Meadows, and from the "watergate" to the sea. It was eventually turned into burgess's meadows.

RYE FALLS.-Otherwise Falling Banks. The N.W. corner of High Latham on the opposite side of the stream to Grange Walls.

SANSON SEAL.-Originally "Sonse and Sele." i.e., prosperity and happiness. An intake from the Garrison or Horsemen's Meadows on the south side of the Foulden road next to the New Close. Now a pleasant residential estate.

SCUDDYLAWE.-Earlier and more correctly Scurrylaw. *Scurry* is from the O.Fr. *scourie*, a stable or shelter for horses. The harrage-keepers were once called Scurriers. Before being let as a farm this land was a Horse Close.

SEGDEN.-*Seggeden*, in Rot. Scot., 1291. O.E. *segg*, sedge or reed, and *denu*, a dene. In the 14th century there was a cell of monks at this place attached to the Hospital of St. Mary Magdalen. The establishment was known as a hermitage, and in after days the ruins were called Segden Chesters.

SHAFTOE'S BATT.-Otherwise the Stanks Closes, i.e., the dried- up stanks between the Snook and the town wall. First enclosed as a pasture for a lessee named Shaftoe.

SNOOK.-The land between the town and the sea; so called because of its length and narrowness. The Snook of Holy Island is a more obvious example of the use of the word. Scand. *snok*, a snake; and thus metaphorically anything long and narrow.

SOUTERGATE.-In Charter Latin "*vicus sutorum*"-street of the shoemakers. Now Church Street.

SPADESMIRE.-A watery area occupying the hollow between the curling pond and the bridge by which the high road crosses the railway. The name signifies a "mire" (Scand. *myra*, a swamp or wet place) artificially made or shaped. It was fed by the overflow from the "cistern" in the Calfhill, and its own

overflow was turned when necessary into the Stanks before the town wall but in an ordinary way passed into the Castle stank and so to the river. Lord Mordington had the right to draw water at the point where it entered the Spadesmire for the use of cattle in the Coneygarth and the Magdalen Fields, whither it was conveyed by a ditch, now dry, which has usurped the name of Spadesmire.

STEPS OF GRACE.-There are two separate orders in the Guild Books that all diseased horses found in the common pasture contrary to order, should be forthwith turned down the Steps of Grace. Is this a euphemism for being shot? For the next time the order appears it reads "should be forthwith shot." The name does not occur anywhere else in the Guild Books. It sounds like a product of the Roundhead period.

TAPPEE.-A name given about the end of the 18th century to the body of water previously known as Spadesmire. It does not occur in the Guild Books, nor in any other document that I have seen.

THISTLE ANNEY.-A bit of haughland by the Whitadder between Cocklaw and the stream. The meaning is obvious.

TODDLES.-Elsewhere this name stands for Tod-holes (i.e., fox-holes) or Tod-hills, Here it should be the former-unless like Foxlaws, a part of Hextell, it has been brought in from somewhere else. It lies opposite to New Water.

UDDINGATE.-Either the original name of Crossgate (Wool Market) or of a street parallel to it, in the earlier days of Berwick. Uddin seems to have been the owner of all or most of it before 1223, when Adam his son presented several messuages in it to Kelso Abbey.

WALDEFGATE.\_Named after one of the many Waldefs connected with the early history of Berwick (12th and 13th centuries); probably Waldeve, second Abbot of Kelso, grandson of Waltheof, Earl of Northumberland, and therefore great-grandson of William the Conqueror. It was a street parallel to Bridge Street next to the town wall.

**WALKERGATE.**-Apparently the street of the walkers or fullers of cloth; but I know no reason for its being so called. On the Tyne Walker is interpreted as *Wall-carr*, the soft or watery ground next the wall, which fits equally well at Berwick. Besides, there was anciently a street called Kergate, which was a branch of Walkergate, which seems to separate the elements of Wal-ker for us.

**WALLACE GREEN.**-See Ravensdown.

**WHITADDER.**-This stream and the Blackadder were no doubt both once known by the Celtic name of *Adur*; but that apparently gave way to O.E. *aedre*, which also means watercourse. In the vernacular this would be confused with adder, both in the common speech becoming "ether" -as in Ethermouth. The epithet *whit* (white) is generally used in place-names for tracts cleared of wood-land or not heavily wooded; while black denotes forest-land or heathery moorland.

**WHITESANDS.**-The fishery on the north side next above the railway bridge. I cannot suggest a reason for the name. Bailiff's Batt was once known by the same name.

**WINDMILL HOLE.**-Now Tweed Street, overlooking the hollow between town and Castle. O.E. *holh*, a hollow.

**WITHERING.**-An extension of Blaystone (Blakewell) on sand banks in mid-channel, just below where the railway bridge now is O.E. *wideryne*, wide-running.

**YARROW.**-Identical with Jarrow, where, as here, there is a extensive tidal mud-flat or slake. O.E. *gyrwe*, bog, fen, slake.

**YELLOW GOWLAND.**-" Yalla gollan " was the Northumbria name for the marsh marigold, but is now probably obsolete "Gollan " is the same as *gowan*, a Celtic name for a flower but commonly applied to the daisy. The Yellow Gowland is an isolated pasture enclosed on three sides by the New Close, and on the fourth by the Foulden road. On the Ordnance Map it is called Gowan Tree.

## **SOME NOTES ON BIRD LIFE ON THE COAST NORTH OF MONKSEATON.**

C. J. GENT.

In the days of John Hancock, some hundred years ago, the coast at Whitley Bay and to the north thereof must have been a paradise for the bird lover, for, in his book on the Birds of Northumberland and Durham, the famous ornithologist gives records of such species as the Yellow-browed Warbler, Pectoral Sandpiper, and Spotted Redshank, as well as a report of a Honey Buzzard being picked up drowned on the shore hereabouts in August, 1835.

Great changes have taken place since that time, however, and nowadays during the summer months the locality tends to be shunned by the bird lover, who prefers solitude away from the maddening crowd. During the busy holiday season one has, however, on a number of occasions had the pleasure of watching the Common Terns, so aptly designated Sea Swallows, diving, whilst the pretty Stonechat is resident on the cliffs opposite St. Mary's Island. In the same locality the jangling notes of the Corn bunting are also to be heard at this season.

As Autumn approaches the Wheatear appears, as do some of the commoner waders, such as the Dunlin, Ringed Plover, and Purple Sandpiper, the latter species frequenting some seaweed covered rocks opposite St. Mary's Island. A Redshank or two are always present and Cormorants are often to be seen flying out at sea. The Rock Pipit is present along the shore in varying numbers at all seasons of the year, and a heap of decaying seaweed on the beach seldom fails to attract large congregations of Starlings.

In the estuaries along the south coast of England the Herring Gull is by far the commonest Gull, but in this part of the country this distinction seems to be held by the Black-headed Gull, large numbers of which gather at the points where sewers enter the sea. Odd Great Black-backed Gulls have been noticed on one or two occasions.

The Winter is, however, the best time for the naturalist, as at this season the shore is very often deserted except for one or two hardier members of the human race. There are usually parties of black and white Scaup a short distance out to sea, and a Red-throated Diver is a regular occurrence. One first watched this



species in the small bay to the north of St. Marys Island, but recently there has on several occasions been one near the shore, just north of the end of the Lower Promenade. The birds are, of course, not in their gorgeous breeding plumage, but their upper parts are brownish and their necks, throats and under-parts silvery-white. It is rather a tantalising species to watch, usually the bird keeps on diving, reappearing some distance away and, by the time one has located it with one's glass, the bird is just proceeding to disappear under the surface of the water once again. Two Mallards were observed just north of St. Mary's Island in October, 1930.

Perhaps one cannot do better than conclude by an account of a visit on a recent February afternoon. There had been snow overnight, but the afternoon was bright though cold, the wind being N.W., moderate in force. There was a heavy sea running, the time being about a couple of hours before high tide.

Just north of the end of the Lower Promenade a flock of about thirty Common Scoters were resting a short distance out to sea riding over the summits of most of the waves, but diving under an occasional larger breaker. There were numbers of both Black headed and Herring Gulls about, and Pied Wagtails were fairly numerous along the sandy shore where an odd Skylark was noticed. A pair of Red-throated Divers were diving a short distance south of the Island, and on reaching the low cliffs just north of here, a number of Rock Pipits and a small Wader probably a Dunlin, flew off the shore, disturbed by a passing pedestrian. Just after this a Snow Bunting alighted on the shore where it remained for some time, being very tame. Its back was brownish, the feathers having black centres, and its under-parts were a pure white, its head being also white except for a small chestnut patch on the crown. Its bill was yellow and its legs black. It was searching for food amongst the small stones on the beach and when it moved it ran instead of hopping.

The foregoing brief remarks will, I think, go to show that the coast to the north of Monkseaton can produce much of interest to a bird lover, although not, of course, so prolific as the more famous stretches further north in our county, but it is nevertheless a profitable place to spend an hour or so when one has not the time to travel further afield.

## **BIRD HAUNTS IN NORTHUMBERLAND.**

GEORGE W. TEMPERLEY.

So much has been written about the Farne Islands Bird Sanctuary that it has become famous throughout the world. In summer one can hardly pick up an illustrated paper without being confronted by a picture of the Pinnacle Rocks or a photograph of nesting Kittiwakes. The impression produced is that the whole of the bird life of Northumberland is concentrated on these tiny islands. This is not the case. Northumberland has many bird haunts of quite equal interest. Abel Chapman, in his "Bird Life of the Borders" and "The Borders and Beyond ", described many of them; George Bolam, in his "Birds of Northumberland and the Eastern Borders", referred to many more; but these books are out of print and difficult to obtain, so that to the rising generation of enthusiastic ornithologists and bird lovers many of the more secluded haunts are little known. It may be helpful to recall some of them.

The bird life of each district has its times and seasons. The river valleys, the coast, the loughs and the moorlands have each in turn their periods of activity and stagnation, of ebb and flow, as regular as the tides. The season begins, if it can be said to have a beginning, in the remote fastnesses of the hills where, in early February, the Ravens are preparing their nests on the few partially inaccessible crags which our moorlands provide. Each pair of Ravens has, as a rule, two or three alternative nesting Sites, and a few of these are so placed as to permit the observer to look into the nest and see the eggs or to watch the development of the young birds. In a normal year, if there be such a thing, much of our severest winter weather falls in February and March, When the stark-naked youngsters are coming into the world, quite unprotected, for the first few days, by down or feathers. Most of the moorland breeding birds do not reach the fells until much later, and the only other nesting species in earliest spring is the Dipper, on the hill burns. George Bolam used to claim that it was our earliest breeder, having eggs in the nest even sooner than the Raven itself and much in advance of the Heron.

Northumberland has now only some nine or ten recognised Heronries. When the nests in these were counted during the census of 1928 they only numbered sixty-six. But our Heron population is very greatly in excess of a mere sixty-six pairs of breeding birds. In many an out-lying plantation of Scots pine or spruce a nest or two, or even more, may be found which have escaped the census-takers. The age-long habit of dwelling in old-established Heronries is wearing down. Tree-felling, during and since the Great War, has destroyed many a noble wood and the Herons have withdrawn to more scattered and secluded groups of trees. A truer estimate of the Heron population may be gauged from the sight of the large number of these birds fishing in the rock-pools along the remoter stretches of our coast in autumn and winter.

In April and May interest shifts to our wooded river valleys where the early spring migrants are arriving. The Tyne valley is as good a place as any for observation. The bridge at Bywell is a favourite stance for the watcher. The first Sandpiper skims through its arches and the earliest Swallow or Sandmartin delays its northward journey to glide above its parapets, while the wooded banks are melodious with the song of the newly-arrived Willow-warbler. Later come the Redstart, Garden-warbler and White-throat, the Cuckoo calls, and the first Swift soars over Bywell Castle long before it has been noted elsewhere. The river Derwent has also its favoured reaches-none better than those about Chopwell and Ebchester. Hulne Park is a paradise for small birds and the favourite haunt of both the Pied and Spotted Flycatchers. The Pied Flycatcher, like the Redstart, follows the streams to the limit of tree growth and its nest may be found in the decaying trunks of birch, alder and rowan on the infant Tynes, the Derwent and the Coquet. The Grasshopper Warble is much more local. It delights in bush and scrub-land and the sites of felled woodlands when replanting has not gone too far. It rarely moves far from its accustomed haunts in the valley of Derwent or mid-Tyne, though it may shift its immediate territory from time to time to suit the changing face of the countryside. A pair may appear unexpectedly in odd places, but they seldom repeat their visit another year. The Yellow Wagtail

is equally local. Well watered, open meadow-land is his desideratum, and, once established, he is loth to leave a suitable district. Houses, factories and railways scare him not and he clings to his remembered haunts so long as a few square yards of grassland are allowed to linger. There are still many open spaces haunted by the Night-jar, some of them not very many miles from the city, but he is most often found about the fringes of the moors, breeding under the shelter of gorse or young pine and quartering the heather nightly in quest of moths and beetles. On summer nights in Upper Coquetdale the weary bird-watcher is lulled to sleep by his drowsy churring. The upper reaches of all our streams are peopled by that inseparable water-side trio of Dipper, Grey-wagtail and Sandpiper. This same choice company may be met with on the glacier-fed torrents of the Alps and on the waters gushing from Pyrenean "cirques." Their tastes are everywhere the same-fresh rippling waters and clear cool air. A companion among the hills is the Ring-ousel, nesting where thick heather overhangs the rocky banks of a stream or clothes some rugged cleugh not far removed from water. In such a site the Merlin also nests; but it must be far out-by if the birds are to escape the gun of the keeper.

The Farne Islands are not alone in providing breeding places for our sea-fowl. The Fulmar Petrel prefers the cliffs of the mainland, and wherever these are passably inaccessible it will breed. Its curious habit of annexing a rocky pitch, long years before it settles down to breed upon it, has been noted all along the coast. For fifteen years a bird or two have haunted the rocky face of the Inner Farne, but no pair has yet been known to breed there. Near Berwick and Bamburgh and at Dunstanburgh and Cullernose, the Fulmar breeds annually in small numbers; but at other points its eggs are too easily "collected" to give it a chance. A bird or two have recently shown an absorbing interest in the cliffs at Tynemouth.

The Eider-duck is not confined to the Farnes. She nests on Coquet Island and would do so more readily on the mainland if her eggs could be protected from the increasing number of prowlers along the shore. The Shelduck obtains this protection concealing her eggs in a convenient rabbit-hole, and

consequently can hold her own along some few miles of our coast. Holy Island would support a large Tern population if the Islanders and visitors together would give the birds some peace. In the breeding season the bents and dunes are quartered diligently by leisured loafers and few nests escape them. Black-headed Gulls leave the shore in early spring to breed on some inland floe or on the islands of a lough. Northumberland has many such breeding haunts. Some of them are long established and well known, such as Pallinsburn, Hallington and the Gull Ponds near Wooler. Others are more remote and less often visited. Our Gull population is large and the demand for nesting sites is so great that on any sheet of shallow water or plashy bog one may happen upon a nest or two, or even at times, upon a considerable colony. A site which in one season may be admirably suited for nesting purposes may in another be quite unfit. The Black headed Gull has a keen appreciation of what is a safe site. A droughty spring may change a quaking moss into unprotected dry land; a wet one may flood the accustomed islands of a lough and leave no place for nests. There is thus no certainty that given site will be occupied in anyone season. Hallington lough is an example of a permanent gullery, but Grindon may or may not be colonised. In a wet spring there are no suitable island at Grindon; in a dry one the waters disappear altogether; but now and again, seasons occur when the tangled vegetation in the centre of the lough is cut off from the shore by a rim of water. Then it is that the Gulls seize the opportunity and a large breeding colony may be found there.

In early summer the moors are most attractive. What more delightful babies to play with than the newly-hatched Golden Plover or the downy Curlews. The game of finding them by watching from afar the actions of their parents is a summer pastime; but only to be indulged in on ground where there is no danger of treading on the crouching chicks. On a few select flocs the Dunlin breeds; but of all the waders his nest is the harder to locate. Revisiting the haunts of the Raven, we may now find the family parties a-wing together. A "flock" of Ravens is rare a sight that it is worth journeying far to seek. In one two of the Ravens' fastnesses we may now find the Peregrine

Falcon, unless the keeper has done his murderous work too well. Judging by the frequency with which the Peregrine is seen to take his prey over the Fenham and Budle slakes, the Cheviot-land pairs must infinitely prefer ducks and waders to grouse. These noble birds might well be spared more often in the country to the delight of all ornithologists and bird lovers.

The breeding season over, the moorlands lose their attraction for bird-lovers and may be left to the sportsmen. The main interest again centres on the coast. The migration tide has turned and thousands of birds are winging their way to the south. Vast flocks from Scandinavia, Finland, North Russia and Siberia, and indeed from Central as well as Northern Europe, fly west to pass over these Islands before turning south to the Iberian Peninsula and Africa. It is these far travellers, not seen at other times upon our shores, that are of chief interest to us. The late Geoffrey Watson observed and noted this movement for several years from Holy Island. The bare catalogues of the species he observed, published at the time in *The Vasculum* and in *British Birds*, are surprising reading. He identified more rare birds in one season than an ordinary observer will meet with in a lifetime. It is a fascinating occupation, in late summer or early autumn, to patrol the shores of Holy Island and to quarter the dunes and the potato fields. At any moment a new rarity may appear; and even if it does not the excitement is hardly less keen. For a whole season nothing of special note may be seen; then, suddenly, comes a year when conditions are favourable to the observer, and for a day or two the Island is full of birds. For it is only when conditions are unfavourable to migration—a sudden storm, a baffling fog or some unexplainable "hold-up" in the trans-continental traffic—that any number of the vast host of passing strangers is forced down to alight upon our shores. At such a time may be seen Blue-throats, Red-breasted Flycatchers or Barred Warblers, intermixed with better-known species such as Black Redstarts, Red-backed Shrikes or Wrynecks. Many of these are not easy to identify, as most of them are young birds in the plumage of immaturity. But even if these rare species evade us there is a delight in observing, a little later, the arrival our own normal winter visitors. To watch Redwings and

Fieldfares winging their way to land from over the trackless sea; to catch the first glimpse of a Short-eared Owl or Woodcock, a mere speck over the waves, and to follow it as it sinks down amongst the sandhills; to observe the landing of a flock of Peewits apparently emerging from the clouds high over the waters; these are sights which convince us of the reality of bird migration. If the actual arrivals take place in darkness, the newcomers may often be discovered lurking next morning amongst the bents. Chaffinches and Bramblings are in the scrub where there were certainly none the evening before; Snowbuntings are flitting like large butterflies along the tide-line; abundant Larks are rising and fluttering above the marram-grass.

Perhaps the Waders are the most reliable source of thrill during the autumn. Never a year passes without some of these birds of double passage pausing to dally on our shores. The Whimbrel, the Ruff, the Greenshank and the Little Stint are merely passers by; the Grey Plover, the Curlew-Sandpiper and the Sanderling linger awhile and may even outstay the winter. Vast flocks of Knots, Bar-tailed Godwits, Turnstones, Purple Sandpipers and Dunlins are our normal winter guests, while Curlews, Redshanks, Oystercatchers and Ringed Plover, most plentiful in winter, are seldom absent from our shore. The winter visitors normally arrive after their autumn moult, when the brightly-coloured breeding plumage is already cast, or they are young birds in their first winter garb of grey and white. But in late summer, with luck, one may happen upon a straggler or two who have left the breeding ground early, or failed to reach it, and are still clad in the gay trappings of matrimony. Knot in bright chestnut plumage; red Godwits equally startling in hue; Grey Plover in dazzling black and silver; Ruffs with full plumes and trimmings; tortoise-shell coloured Turnstones brown, black-bellied Dunlins—all our familiar Waders; but in strange "fancy dress." It is well worth while dragging ones over miles of weary sandhills on a glaring August day to stalk birds of such fine feather.

Later in the year, when the host of our winter visitors is residence on our coast, it is a rare treat to ensconce oneself at point of vantage on some outlying sandhill to watch the army of

waders carry out their orderly retreat across the mudflats as the tide sweeps up the shore. Here they come in haste, feeding as they run huddling together as the dry spaces narrow. Now small flocks marooned on rapidly vanishing islands of sand, take wing and fly shorewards to alight almost at our feet. As the advancing tide reaches high-water mark the crowd thickens. Little Dunlins and Ringed Plover dodge about under the feet of stately Curlews and Godwits; Knots jostle one another; Oystercatchers fly off in groups to seek rocky reefs not yet covered by the tide. So close to us is the throng that we can pick out the paler Sanderlings and the smaller Stints from the host of active Dunlins. Suddenly they take alarm and the whole flock rises, wheels around and dashes off at full speed along the shore, separating out as it goes; Knots, in mass formation, flying like the wind, Redshanks and Dunlins darting here and there, Curlews and Godwits, slower to rise, lumbering along behind until they pick up speed, and Ringed Plover skimming over the water only to return in a few moments to resettle on the sand.

A similar sight may be witnessed when the tide covers the rock-pools and creeps over the seaweed-clad reefs. Here it is Turnstones and Purple Sandpipers which hurry shorewards; reluctantly leaving their happy hunting-grounds. They retire before each advancing wave, but, as it ebbs, they follow it to the last uncovered inch, fleeing from the next wave on rapid wing lest it overwhelm them. With them come the Oystercatchers and Redshanks, less hurried and more dignified in action. The Rock-pipits also come ashore, looking, as always, strangely out of place amongst the seaweed. There are no better places from which to watch this active scene than the rocks at Boulmer village or the long reef to the south of Bamburgh.

In winter the sea itself, just off-shore, is the haunt of many species of Duck and Diver. Ensconced in such a coign of vantage as the rest of the ridge of the Stag Rocks at Bamburgh, one may enjoy a scene of great activity. Eiders are never absent from the fringe of that rocky shore; and the varying plumage of the drakes throughout the seasons is a constant source of interest and speculation. The Scoter is the commonest sea-duck. Often large flocks of immature grey-cheeked birds come close inshore



to fish. Adults are less plentiful and the rare Velvet Scoter only occurs on "red-letter" days. Scaup are constant visitors and after rough weather the Long-tailed Duck puts in an appearance. The drake is a funny little creature. Nature must have conceived him in a fit of merriment. A cousin to the Harlequin Duck, he is the "Pierrot" of the company. He is an expert diver and pops up again with his plumage spry and his tail a-cock, as though water had no power to wet him. The Red-breasted Merganser is another frequenter of the coast and may be seen diving in the roughest surf. The Red-throated Diver is also there and occasionally a Grebe in winter plumage is seen-usually the Great-crested but sometimes the Slavonian. From this point also the flashing white Gannet may be watched as it wheels over the sea or dives in headlong manner upon its prey. At times vast flocks of Mallard and Wigeon spend the daylight hours afloat off-shore. They are waiting for the dusk to allow them to fly in to feed on the mudflats of Fenham or Budle. Sometimes, scared by a passing trawler, they will rise en masse and sweep past like a black smoke-cloud low down upon the horizon. After the turn of the year the flocks of Brent Geese arrive, often thousands strong. The sight of such an army at rest on a sand bar or flighting in mass formation, provides a never-to-be-forgotten thrill. "Grey" Geese are also here and their long skeins can be seen trailing across the sky as they fly to or from their favourite feeding or roosting grounds.

But the sea-shore is by no means our only winter bird-haunt. The Northumberland loughs are a favoured resort of waterfowl the winter through. Grindon is easy of approach. Its whole extent can be surveyed without leaving the Roman road. Hidden behind the wall one may steady one's field-glass and pick out one by one, the various species of waterfowl afloat on the surface or feeding along the margin. Crag Lough, though conveniently situated for observation, is disappointing. Few birds care to feed there and if by chance one happens upon a small party of Duck they become aware of one's presence immediately, despite the cover of the pine-wood, and are gone before one has time to examine them. Crag Lough does not readily freeze over, however, and in severe winter weather one may find open water there.

if nowhere else. Then is the time to see the waterfowl at their best. Standing on the ice or splashing in the water are countless duck-Mallard and Teal, Wigeon, Pochard and Tufted for the most part; but, with luck, a few Shoveler or an odd Pintail. If the hole in the ice is extensive enough, Golden-eye may be diving there or a pair or two of Goosanders, even at this early date going through their curious courtig antics. A flock of Whooper Swans, annual winter residents on these loughs, is sure to be there, often accompanied by a smaller number of Bewicks. In sunlight, against the brilliant snow, their white plumage looks less spotless than is its wont. In approaching Crag Lough one must beware of disturbing the Jackdaws in the cliffs. Their cries of alarm scare every bird from the lough before one reaches it.

Greenlee is too vast for a comfortable survey. It is best approached through the gorge cut by the streamlet flowing down from Broomlee. In the shelter of this passage, or screened by the pine-wood, a cautious view of the lake may be obtained. Some of the Swans may be near enough to enable one to determine their species, but as a rule they are too far off. The Mutes can be identified by their curved necks and puffed-out plumage, but to distinguish Whooper from Bewick is no easy matter. If their bills cannot be seen in detail, only their size differentiates them; and who can judge size across half a mile of open water? When the surface of the lake is still, the Duck can be seen and identified from afar, but in a breeze the waters become choppy and all that can be made out are black dots bobbing rapidly in and out of view. Broomlee is an alternative feeding ground for the Swans and besides other duck, it is a "tarr'ble smittle place" for Goosanders. A flock of "Grey" Geese invariably finds food and harbourage in winter on the fells adjoining the loughs and their skeins may be seen across the sky. Seldom does one get near enough to determine their species, but both Bean and Greylag have been identified.

Thus, throughout the year, by a careful selection of appropriate haunts the bird life of Northumberland may be observed and studied in all its wealth and variety.

## THE SOCIETIES.

### NORTHERN NATURALISTS' UNION.

The annual meeting was held in the University Science Department, Durham, on February 2nd, and although the attendance was smaller than usual, it was one of the most satisfactory meetings that have been held. Mr. R. H. Sargent presided, and the Treasurer, Mr. J. E. Ruxton, being unfortunately too ill to be present, the Secretary read both reports. The financial position was satisfactory, the General Account showing a balance of £22 in hand after transferring £15 to the publication Fund, but the balance would have been larger if members had paid their subscriptions more promptly. Part 3 of the Transactions had attracted much attention, copies being sought from Berlin on the east to Ottawa on the west, but it had been possible to print so large a number only because of the generous help given by Mrs. Hodgkin, an anonymous friend, Messrs. E. P. Blackburn, F. C. Garrett, G. B. Gibbs, W. Hall, A. Raistrick, R. H. Sargent, and the Wallis Club, who between them had paid more than half of the cost.

Dr. K. B. Blackburn was elected President, with Messrs. G. B. Gibbs, B. M. Griffiths, J. W. H. Harrison, T. A. Lofthouse, R. H. Sargent, and G. W. Temperley as Vice-Presidents, Mr J E. Ruxton, Hon. Treasurer, Mr. R. B. Cooke, Hon. Auditor and Dr. F. C. Garrett, Hon. Secretary. Business being finished Mr. J. Omer-Cooper read a most stimulating paper on "The Pleasures of Bug-hunting," which must have filled his heart with a desire to become entomologists, and there was a discussion.

After passing very cordial votes of thanks to Professor Orme Masson for allowing the rooms to be used, and to Dr. B. Millar Griffiths for the excellent arrangements he had made, the members adjourned for tea and conversation, the latter proving so interesting that there was general reluctance to leave.

Since the meeting the Sunderland Technical College Biological Society (Hon. Secretary, Mr. R. J. Winterton) has been affiliated to the Union, and so active a society should prove a valuable addition to it.

## RECORDERS AND REFEREES.

The Northern Naturalists' Union having been compelled to revise its lists of Recorders and Referees (*Vasculum*, XV, p. 70), the naturalists whose names follow have kindly undertaken the work. Every field worker is urged to help by sending in full lists of finds, giving always the place and date of the observation, and including even common species so that our knowledge of their distribution may be complete.

### RECORDERS.

- Flowering Plants*.-G. W. Temperley, 4, Selborne Avenue, Low Fell.  
*Algae-land*.-B. Millard Griffiths, D.Sc., University Laboratories, Durham.  
*-marine*.-Miss K. B. Blackburn, D.Sc., Armstrong College, Newcastle, 2.  
*Ferns, Fungi, Lichens, Myxomycetes* .-A. W. Bartlett, M.A., Armstrong College, Newcastle, 2.  
*Bryophyta-Mosses and Hepatics*.-J. B. Duncan, 6, Summerhill Terrace, Berwick-on-Tweed.  
*-Sphagnaceae*.-Miss E. M. Lobley, Netherknowe, Windmill Hill, Hexham.  
*Galls-Zooecidia*.-Professor J. W. Heslop Harrison, D.Sc., F.R.S., Armstrong College, Newcastle, 2.  
*-Phytoecidia*.-A. W. Bartlett, M.A. See above.  
*Mammals*.-L. C. Beadle, M.A., College of Medicine, Newcastle, 2.  
*Birds*.-G. W. Temperley. See above.  
*Fresh-water Fishes, Amphibia, Reptiles*.-H. O. Bull, Ph.D., Dove Laboratory, Cullercoats.  
*Marine and Brackish-water Vertebrates and Invertebrates*.-The Director, Dove Laboratory, Cullercoats.  
*Land and Freshwater Mollusca*.-Rev. E. Percy Blackburn, 51, Holly Avenue, Newcastle, 2.  
*Turbellaria* -J.B. Craggs, 1, Spencer Street, North Shields.  
*Amphipoda*-Professor A. D. Hobson, M.A., Armstrong College, Newcastle, 2.  
*Isopoda*-J Omer-Cooper, M.A., Armstrong College, Newcastle, 2.

*Arachnida*.-Rev. J. E. Hull, D.Sc., The Vicarage, Belford, Northumberland.  
*Myriapoda, Thysanoptera, Apterygota*.-R. S. Bagnall, D.Sc., 9. York Place, Edinburgh.

*Hymenoptera Aculeata*.- J. S. Ruxton, Elmfield, Blackhill.

*Diptera*.-W. J. Fordham, M.D., The Garth, Barmby Moor, York.

*Coleoptera*.-G. B. Walsh, B.Sc., Linthorpe. Stepney Drive. Scarborough.

*Lepidoptera*.-Professor J. W. Heslop Harrison, D.Sc., See above.

*Hemiptera-Heteroptera, Aleyrodidae, Psyllidae, Coccidae*.- G. H. Harrison, Ph.D., The Avenue, Birtley. Durham.

*Auchenorhynca*.-S. J. A. Bosanquet, Laburnum House, Forest Hall, Northumberland.

*Aphididae*.-A. Steel. M.Sc.. Armstrong College Newcastle, 2.

*Odonata* (Dragon Flies).-G. H. Harrison, Ph.D. See above.

*Orthoptera* (Earwigs, Grasshoppers, Crickets. Cockroaches).- F. C. Garrett, D.Sc., South View, Alnmouth.

*Geology and Early Man*.-A. Raistrick, Ph.D., Armstrong College Newcastle.

Any Recorder will be glad to help naturalists by identifying specimens, as also will the specialists named below; every specimen should have the date and place of its finding, and if its return is desired stamps must be enclosed for postage. Any Record or Referee will advise beginners who wish to take up the study of the group with which he is concerned.

## REFEREES.

*Flowering Plants*.-Miss D. B. Blackburn, Training College Hostel, Burden Road, Sunderland.

J. E. Nowers, 79. Haughton Rd., Darlington

Miss M. A. Temperley, 4. Carleton Terrace, Low Fell.

Miss M. E. Urton. Grange Vale. Forest Hall, Northumberland.

*Rosa and Rubus*.-Professor J. W. Heslop Harrison, D.Sc., F.R.S. See above.  
*Salicaceae, Violaceae, Caryophyllaceae*.-Miss K. B. Blackburn, D.Sc. See above.

*Grasses*.- B. Millard Griffiths, D.Sc. See above.

*Sedges*.-A. W. Bartlett. M. A. See above.

*Mosses*.-J. E. Nowers. See above.

*Marine Algae*.-Miss A. L. Whittaker, Ph.D., Training College, Ryhope Road, Sunderland.

*Birds*.-S. E. Cook, The Whaggs, Whickham, Co. Durham.

J. Crawford, 24, Oxford Street, Pallion, Sunderland.

J. E. Ruxton. See above.

A. Stainthorpe, 29, Hollyhurst Road. Darlington.

H. Tully, Newton Hall, Stocksfield.

T. Welch, St. George's Terrace. Hexham.

*Lepidoptera*.-F. W. Gardner, B.A., 15, Lesbury Road, Heaton, Newcastle.

J. R. Johnson, 3, Devon Gardens, Gateshead.

J. P. Robson, 10, Vane Road, Barnard Castle.

*Coleoptera*-general.: R. B. Lucas, Dale Lodge, Staindrop Road, Darlington.

-*Dytiscidae*.-Mrs. J. Omer-Cooper, 11, Bellegrave Terrace, Newcastle, 2.

-*Gyrinidae*.-J. Omer-Cooper, M.A. See above.

-*Hydrophilidae*.-Miss E. Herron, 15, Lilac Gardens, Low Fell.

*Mollusca*.-R. B. Lucas. See above.

F. C. GARRETT,

*Hon. Secretary.*

## WALLIS CLUB.

## INDOOR MEETINGS.

The annual general meeting was held on January 21st. Mr. G. W. Temperley was elected president for the coming year. It was reported that the membership of the club stood at the same figure as last year and that the financial state of the club was satisfactory. A grant of £3 3s. 0d. was voted in aid of the N.N.U.

publication fund. The club received with great regret the resignation of Dr. F. C. Garrett from his position as financial secretary after 12 years of valuable service. The retiring president, Mr. R. B. Cooke, gave a very fine lantern exhibition of his more recently made coloured slides, the bulk of which were of plants in his own garden, many of great beauty and rarity.

At the ordinary meeting held on February 4th Mr. S. J. A. Bosanquet described and exhibited some useful methods of collecting and mounting small insects, and Mr. B. Gibbs showed a number of curiosities derived from the action of waves upon hair fibres, and other similar phenomena resulting in the production of balls of various materials. The president exhibited a comprehensive collection of alpine plants belonging to the *Ranunculidae* collected by himself in the Swiss Alps during his recent visits.

Professor A. D. Hobson gave a paper on Corals at the ordinary meeting of February 18th. The structure and relations of the individual polyps to the diverse colonial forms assumed by the were explained with great clarity. Some interesting points in the physiology, drawn mainly from the results of the recent Great Barrier Reef Expedition formed the concluding part of his remarks. Discussion largely centred round the relationship corals to their symbiotic algae.

The Annual Conversazione was held in the Botany Department of Armstrong College by permission of Professor Harrison and the Council of the College, on March 5th. There were two lecturettes-one on Snakes by Dr. J. H. Day, based largely on his South African experiences-the other by Dr. H. O. Bull being a lecture demonstration of various living microscopic organisms by micro-projection. The exhibits were numerous and attracted considerable interest. Mr. R. B. Cooke staged a magnificent collection of plants and flowers from his garden. A novel exhibit entitled "Have you a nose?" illustrated the chemical constitution of a wide range of botanical odours. Dr. H. O. Bull showed variety of living marine organisms, including many developing stages; Mr. Bennett Gibbs had a number of curious stones, Mrs. Blackburn some Hymenophyllums, Mr. S. J. A. Bosanquet photographs and specimens from a Sussex salt marsh. There were number of other exhibits.

An ordinary meeting was held on March 18th. Mr. L. C. Beadle gave an account of his researches in Tropical Swamps and discussed the effects of this environment upon the fauna and flora of these regions in the Paraguayan Chaco and the headwaters of the Nile. It was followed by an interesting discussion on some of the physico-chemical factors involved.

#### DARLINGTON AND TEASDALE FIELD NATURALISTS' CLUB

The Annual *Conversazione* was held on January 15th. It has become the custom for the President to speak on this occasion of his personal interests, and this year Mr. Nowers reviewed his botanical work during many years. Though chiefly carried out in the Midlands, his search for rare plants had carried him far afield on British coasts. It was with the greatest interest that members listened to the long record of keen work. Photographs and herbarium specimens recalled early journeys. A variety of exhibits included granites given by the late Mr. E. O. D. Sibson, flints presented by Mr. Broadhead and Pacific shells collected by Mr. Lucas. Full justice was done to the refreshments provided by the ladies.

The following week Capt. T. P. McDowell spoke of the "Romance of Prospecting and Gold Mining." He recalled with a fund of humorous anecdotes his experiences in South Africa and Rhodesia that had provided first-hand knowledge of such work.

A discussion took place on January 29th concerning the drumming of the woodpecker, but in spite of the theories put forward by Mr. A. Stainthorpe and Mr. Drury, the meeting was left with an open mind and an invitation from Mr. Inness to study further the birds that frequent his garden.

On February 12th Dr. Wilfred Jackson gave a most interesting account of his excavations in Egypt. His lantern slides showed something of the grandeur that remains of a civilisation of 5,000 years. Details from personal observation made Mr. Gordon



Wood's lecture on the flight of birds a vivid study. It was well illustrated by his fine water-colour paintings and lantern slides.

On February 20th Dr. Budger spoke shortly of fatigue in metals and then revealed the amazing way in which the gyroscope has been applied during the last 20 years. The lecture was copiously illustrated from Dr. Budger's own researches.

The next week Mr. Inness told of the great variety of birds that haunted his orchard. Their perpetual interest to keen observers and their insect-catching had outweighed the occasional damage.

On March 12th Mr. R. Holland lectured on the manufacture of leather, supplementing his talk with slides of the operations by hand and machine.

Mr. A. Stainthorpe, on March 19th, with the help of lantern slides, described "Some British Beauty Spots" and the work of the Holiday Fellowship Association in spreading their fame.

Numerous lantern slides of the east of Scotland illustrated an interesting talk on the subject by Mr. G. H. Nicholls on March 26th.

On April 2nd Mr. H. D. Pritchett spoke of the evolution of the English Castle. Local examples showed the many changes from Roman camp to modern mansion. Mr. Sargent, in contrast, showed slides of world air travel.

#### N.N.U. NOTES FOR WORKERS.-No. 1.

It was thought that naturalists might be more willing to help in the recording work if, besides asking for general lists of localities, some indication were given of problems to which attention is needed. It has therefore been decided to publish, at intervals, details of special material wanted or of rare or critical species the distribution of which needs investigation. Below the first of these lists. Please see where you can help.

#### FUNGI.

1. Mr. Bartlett would like leaves bearing the pustules of rust Fungi either fresh or dry, as convenient, each, of course, with full details of the locality.

## FLOWERING PLANTS.

Since the date of Baker and Tait's "Flora of Northumberland and Durham" certain species have been split up, \* and for that and other reasons records or specimens of the following are needed :-

1. The common Water Blinks (*Montia fontana* L.) has been divided into two: *M. fontana* L. (= *lamprosperma* Cham.) and *M. verna* Neck. (= *chondriosperma* Fenzl.). The former has a smooth shiny seed with a reticulate pattern (see Fig. ), whereas the latter is covered with warts and often has a dull surface (Fig. 2). Again the former has the young fruit longer than the persistent "calyx" (Fig. 3), and the leaves free at the base, whereas in the latter the calyx is as long as, or longer than, the fruit (Fig. 4) and the bases of the leaves are just joined. Fig. 5 shows a plant of *M. verna*, but it is often much more dwarf and compact. *M. fontana* is usually larger and more straggly. This latter form is the commonest here but the distribution of both is needed. Straggling submerged forms particularly should be collected as they may be different. Records or specimens (fresh or pressed) to be sent to Dr. Blackburn.

2 Besides the common Agrimony (*Agrimonia Eupatoria* L.) we have in our area *A. odorata*, the Fragrant Agrimony. It is sufficiently similar to be mistaken for the common form and it is probable that the known records are really too few. It differs from the Common Agrimony by being taller and larger in all its parts. The leaves are more acute and the fruit is bell-shaped, smooth at the base and with few hairs in contrast with the smaller straight-sided ridged and very hairy fruit of the common species (c.f. Figs. 10 and 11). Records to Mr. Temperley.

3-The common Valerian in our counties is *Valeriana sambucifolia* Mikan, which can be distinguished from the rarer *V. officinalis* L. by having long stolons, while the latter has only short suckers. The easiest method of distinguishing

\* Figs. of these are given in "Further Illustrations of British Plants" Butcher & Strudwick, Reeve & Co., 1930.

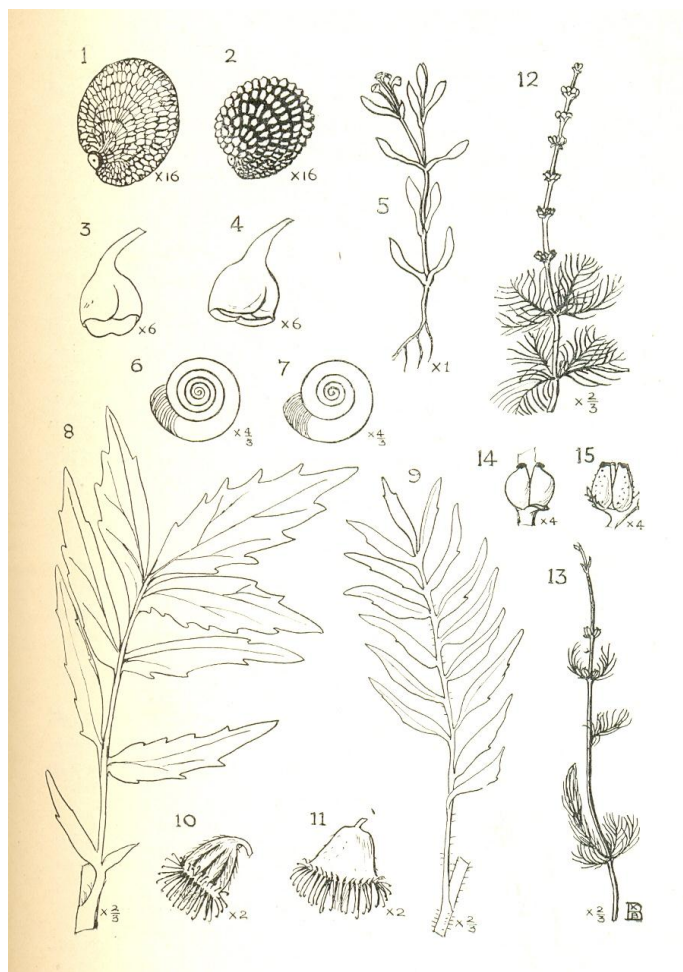
is by the leaves: Figs. 8 and 9 are of the basal stem leaves of *V. sambucifolia* and *V. officinalis* respectively. It will be noticed that the former has fewer leaflets, which are toothed on both sides, whereas in the latter they are entire above. The fruits of *V. officinalis* are described as being rather more conical. Records to Mr. Temperley.

4. All three of the Water-Milfoils (*Myriophyllum* spp.) are recorded for our counties, but the records are few and confusion is suspected. *M. verticellatum* L. is rare but, when in flower, cannot be mistaken for the others because the bracts are leaflike right to the top of the spike. *M. alterniflorum* D.C. has probably often been mistaken for *M. spicatum* L. The latter has larger spreading leaves in fours (Fig. 12), whereas *M. alterniflorum* often has less at a node and they tend to turn up more, so that the vegetative shoots look like cylinders often not more than half an inch in diameter. The inflorescence of *M. alterniflorum* is characteristically nodding in the bud, but the stamens soon fall off, leaving the bracts only, as seen in Fig. 13. The fruits of *M. spicatum*. and *M. alterniflorum* are illustrated in Figs. 14 and 15. Records to Mr. Temperley.

5. The Meadow Rues (*Thalictrum* spp.) have been subdivided lately and thus need re-recording for our counties. Dr. R. W. Butcher. Fisheries Research Station, Alresford Hants., will be glad to name specimens sent to him with full details of locality.

6. Dr. Blackburn would be very grateful for specimens of wild pansies, especially those of the small flowered types such grow in cultivated fields or on waste land. Whole plants a desirable and they should be either posted promptly, in tin if possible, or else pressed and sent when dry. This is an urgent 1935 request as she hopes to write up the pansies for the next N.N.U. Transactions.

7 Dr. Blackburn would also like living plants of *Draba* (*Erophila*) *verna* L., the Whitlow Grass, or pressed ones with ripe seed, if possible.



## BIRDS.

1. Mr. Temperley would like records of localities for the Green Woodpecker and the Tree Sparrow.
2. He would also like to hear of inland breeding localities for the Ringed Plover and the Oystercatcher.

## MOLLUSCA.

1. *Helicella caperata* (Mont.) and *H. heripensis* (Mabile) are similar in appearance and the occurrence of the latter in our counties has only recently been discovered. Both shells are a creamy white with a striate surface and variable mottled brown markings. *H. caperata* (Fig. 6) has more whorls and coarser striae than *H. heripensis* (Fig. 7); looked at sideways it is more pyramidal in shape and, from below, it has a smaller and more central umbilicus. *H. heripensis* is described as being more often in long grass and cultivated places than is *H. caperata*, which we usually get on the dunes. Specimens suspected of being *H. heripensis* should be sent to Mr. Blackburn for verification.

## CRUSTACEA.

1. Professor Hobson would be glad to receive specimens of Fresh-water Shrimps from waters above 1,000 feet. The specimens are best put straight into a tube of spirit.

## INSECTS.

1. Mr. Steel wants collections of Aphids (Green-Fly, etc.). Specimens from one kind of plant only in each tube of spirit should be accompanied by a piece of the plant or at least its name and, of course, locality.
2. Dr. Garrett would like specimens of earwigs, cockroaches, crickets, and grasshoppers either alive or dead, with data.

KATHLEEN B. BLACKBURN,

*President*

## NOTES AND RECORDS.

### NOTES.

#### Early Spring Flowers.

Owing to the mild weather of December, 1934 and the first few weeks of 1935, many Spring flowers were in bloom earlier than usual. Coltsfoot was seen in bud as early as January 5th and the flowers opened a few days later. On the 12th, Barren Strawberry was in flower at Stannington and Lesser Celandine was on the point of opening. The cold winds and snowstorms of January 25th to 27th checked further advance for a day or two, but on February 5th, Primroses were seen in flower on the coast and Coltsfoot was in bloom on the railway embankments. Another cold spell with occasional falls of snow held up further progress and it was not until March 3rd that Primroses and Sweet Violets were in flower locally, while Hairy Bitter-cress was in bloom on the same date. On March 10th, Golden Saxifrage, Shepherds' Purse and Alpine Penny-cress were in flower and by the 17th, Wood Anemone and Moschatel were blooming in sunny places. On March 25th, I was able to exhibit specimens of 38 species of flowering-plants and trees in bloom on the Hancock Museum flower-table.

The following comparisons with previous years are worth noting :-

	1933	1934	1935
Anemone	March 25th	March 25th	March 17th
Green Hellebore	19th	18th	9th
Hairy Bitter-cress	25th	3rd	3rd
Alpine Pennycress	25th	25th	10th
Shepherds' Purse		18th	10th
Greater Stitchwort	April 2nd	April 8th	23rd
Blackthorn	March 25th	14th	24th
Barren Strawberry	12th	March 3rd	Jany. 12th
Golden Saxifrage	25th	25th	March 10th
Moschatel	19th	April 14th	17th
Primrose	12th	March 4th	3rd
Spurge Laurel		Feby. 4th	Jany. 20th
Dog's Mercury		Jany. 28th	24th

-MARY E. URTON.

#### The Heron in Northumberland and Durham.

In 1928 a Census of Heronries in England and Wales was carried out under the direction of Mr. E. M. Nicholson, particulars of which were published in "British Birds." The final Report of this Census showed that the breeding population of Herons in that year was between 3,872 and 3,980 pairs, or, taking the mean, 3,926 pairs of birds.

In Northumberland 22 reported heronries were visited, but only 9 of them contained occupied nests, the other 13 having become extinct, most of them within the previous twenty years. The 9 Heronries contained between them from 62 to 68 occupied nests (exact counting is no easy matter). In the County of Durham only one Heronry had survived, that of Gainford, with 11 occupied nests in 1928. It has since been totally deserted. This represents a breeding population in the two counties of from 73 to 79 pairs.

In 1934 a fresh count of the nests in about 25 per cent. of the Heronries of England and Wales as made, when a comparison of the numbers thus obtained with those of 1928 showed that, on the whole, there had been an increase of about 2 per cent. in the number of nests occupied; the breeding population being calculated at somewhere in the neighbourhood of 4,000 pairs.

This increase was found not to be uniform over the whole area. In the three counties Northumberland, Durham and Yorkshire there was a definite reduction in the numbers. In this area, amounting to nearly one-sixth of the whole country, a two-thirds sample of the 1928 Heronries was re-counted. The result shows an apparent regional decrease of some 16 per cent. over the six-year period, the 1934 index for this region working out at only 84 if 1928 be taken as 100. If the Gainford Heronry were not excluded, as it has actually become extinct, the decline would be even marked. Of ten Heronries counted in this region both in 1928 and 1934 no less than seven showed declines while only two showed increases.

Considering the frequency with which one sees Herons in Northumberland and Durham, in our river valleys, on the hill burns and feeding along the shore, it is difficult to believe that our local population is so small or that it has fallen off to this extent in the last six years. George Bolam, in his "Catalogue of the Birds of Northumberland" (1932), wrote-"Some of our ancient Heronries have disappeared, owing to timber-felling, within recent years, but others have increased or become established, as at Longridge, Ewart Park and elsewhere; while casual, outlying nests have also, perhaps, become more frequent." It is most desirable that more information should be obtained about these "casual, outlying nests." If it is true that they are increasing in numbers then the reduction shown in the Census figures is merely the result of a change of habit on the part of our local birds. If readers of *The Vasculum* will help by the collection of definite data on the occurrence of odd nests or groups of nests this interesting problem might be more thoroughly investigated. Reports should be sent to George W. Temperley, Recorder in Ornithology for the N.N.U., 4, Selborne Avenue, Low Fell, Gateshead.

#### **Phenological Dates.-Consett.**

The following phenological dates of "firsts" for 1934 have been accepted by the Meteorological Office, London, from the Consett and District Naturalists' Field Club :-Plants: Hazel, Feb. 18th; Coltsfoot, Mar. 10<sup>th</sup>; Wood Anemone, Apl. 16th; Blackthorn, Apl. 19th; Garlic Hedge Mustard May 6th; Horse-chestnut, May 26th; Hawthorn, June 10th; White Ox-eye, June 7th; Dog Rose, June 13th; Black Knapweed, July 12th; Harebell, July 17th; Greater Bindweed, July 14th; Devils-bit Scabious, Aug. 10th; Ivy, Oct. 18th; Winter Aconite, Jan. 21st; Snowdrop, Feb. 4th; Yellow Crocus, Feb. 10th; Celandine, Mar. 25th; Christmas Rose, Jan. 10th; Oak May 10th; Purple Lilac, May 26th; Bird Cherry, May 15th; Laburnum May 12th; Elder, June 29th; Horse-chestnut-First leafing, Apl. 15th; colour change, Sept. 18th; fruit ripe, Sept. 20th; leafless, Oct. 28th.

Birds: Song Thrush, Mar. 7<sup>th</sup>; Swallow first seen, Apl. 19<sup>th</sup>; Cuckoo, May 3<sup>rd</sup>; Flycatcher, May 10<sup>th</sup>; Swallow, Oct. 8<sup>th</sup>; Wheatear, Apl. 17<sup>th</sup>; Willow Warbler, Apl. 17<sup>th</sup>; Sand Martin, Apl. 19<sup>th</sup>; Tree Pipit, Apl. 19<sup>th</sup>; Sandpiper, Apl. 20<sup>th</sup>; Redstart, Apl. 20<sup>th</sup>; House Martin, May 6<sup>th</sup>; White-throat, Apl. 12<sup>th</sup>; Grasshopper Warbler, Apl. 13<sup>th</sup>; Whinchat, May 7<sup>th</sup>; Garden Warbler, Apl. 28<sup>th</sup>; Swift, May 16<sup>th</sup>; Corncrake, June 9<sup>th</sup>; Blackbird begins singing, Mar. 11<sup>th</sup>; Lark, Feb. 11<sup>th</sup>; Frogspawn first seen, Mar. 19<sup>th</sup>; Cuckoo last heard, June 25<sup>th</sup>; Sand Martin last seen, Sept. 29<sup>th</sup>; House Martin last seen, Sept. 27<sup>th</sup>; Redwing arrives, Oct. 26<sup>th</sup>; Fieldfare arrives, Oct. 26<sup>th</sup>.

Insects: Honey Bee visits flowers, Mar. 7<sup>th</sup>; Queen Wasp first seen flying in open, Apl. 30<sup>th</sup>; Small White Butterfly first seen, May 9<sup>th</sup>; Meadow Brown Butterfly, June 18<sup>th</sup>.-H. ELLERINGTON.

### **Craster Bird Notes.-Autumn, 1931.**

The following notes should have been sent for the February issue but were temporarily forgotten:-

1934. Last Swift seen-Oct. 1st : 3 birds flying together. Adult Cuckoo seen-Sept. 10<sup>th</sup>.

Hen Harrier seen-Nov. 1st (1st ever seen in Northumberland).- J. M. CRASTER.

### **Early Birds at Craster. 1935.**

Several song-thrushes were in song very early here, and also wood-pigeons cooing: although for the Phenological Return I naturally have January 1st as the first date for the above: actually the former began on Dec. 5<sup>th</sup>, and the latter Dec. 1st. There were in fact at least 3 song-thrushes and 5 wood-pigeons in full song by January 1st. Great Tits were also "spring calling" before the end of the year.

The flower season is also early, aconite first out Dec. 27<sup>th</sup>, snowdrop Jan. 1st, and primrose Feb. 1<sup>st</sup>.

The following bird anecdote is, unfortunately, not first hand information, but I can rely upon the word of the observer. On one of the farms on this estate a brood of young pheasants, numbering about ten, was seen with the hen bird on January 15<sup>th</sup> and 17<sup>th</sup> respectively: while they were also heard plainly by another person about the same time, though the long grass hid them. Unfortunately I was not told about this strange happening, but from their size the young ones were thought to be about a fortnight old.

-J. M. CRASTER.

### **Re-Mating of Birds.**

With regard to the article in the Irish Naturalist, noted by the Editor in last November's Vasculum, concerning birds finding new mates I might mention an instance of several years ago here. I found the nest of a sparrow-hawk in a high spruce tree, on which the hen was hard sitting. She always managed her exit so well that I could not shoot her, but I did kill 3 cocks at the same nest in 5 days, after which the hen bird deserted, so presumably the available supply of spare husbands was exhausted!

-J. M. CRASTER.



## RECORDS

## BIRDS.

**Bombycilla garrulus** L. Waxwing.

66

A flock of six birds seen feeding on holly-berries at Mosswood, near Consett, was reported in the *Newcastle Evening Chronicle* of February 2nd,

**Phoenicurus ochrurus** Gm. Black Redstart.

66

On February 17th and subsequent days, a cock bird was observed by Mrs. Potter at Sea Lane, Roker. For several days it haunted the corner of a new building site where it was seen by various observers until March 18th.

**Podiceps nigricollis** Brehm. Black-necked Grebe.

67

For several days during the first week of March a single bird, in winter plumage, remained on one of the Reservoirs of the Newcastle and Gateshead Water Company at Whittle Dene, where it was seen under excellent conditions for close observation by Messrs. H. Tully, T. R. Goddard and G. W. Temperley.

**Nyroca fuligula** (L.) Tufted Duck.

66

During the second week in March a flock of Tufted Ducks several days on the pond at Saltwell Park, Gateshead. On the 12th the flock numbered thirteen birds, eight drakes and five ducks.

-GEORGE W. TEMPERLEY.

## ARACHNIDA.

*ANALGIDAE*. Feather Mites.**Proctophyllodes glandarinus** Koch.

68

On the flight feathers of a Pied Wagtail, Belford Vicarage, April, 1935. This mite occurs on many small birds, but for me this is a new host, though I have specimens from Yellow Wagtail.

J. E. HULL.

## FUNGI.

**Crucibulum vulgare** Tul. "Bird's Nest" Fungus.

66

On the wooden beams of the old. Fish Locks, Middleton-one-Row, December 1st, 1934.

**Clitopilus carneo-albus** (With.) Fr.

66

Beside a grassy track through a felled portion of Plantation, near West Auckland.

**Puccinia lapsanae** Fckl "Nipplewort Rust."

65

Nipplewort seedlings already badly galled and aecidia well developed March 2nd, Sedbury Park.

**Cordyceps militaris** Fr. "Caterpillar Fungus."

66

A tawny-orange club growing from a Noctuid pupa, Flatts Woods Barnard Castle.-J. B.

NICHOLSON.

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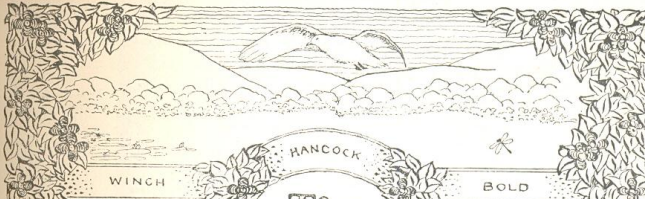
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# The Vasculum

The North Country Quarterly  
of Science and Local History.

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Vol. XXI. No. 3. August, 1935.

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# THE VASCULUM

Vol. XXI. No.3

August, 1935.

## OBITER DICTA.

J. E. H.

1915-1935.

The number of the present volume of *The Vasculum* may have caught your eye; if not, please note that we are in the midst of the twenty-first volume. With our next number we shall not quite attain a Silver Jubilee, but we shall "come of age." It was in January, 1915, that the publication of a local Quarterly devoted to Natural History was definitely decided upon, the parties to the decision being R. S. Bagnall, J. W. Heslop Harrison and myself, but George Bolam was invited to make a fourth and took the matter up enthusiastically as any of us. Sundry names were put forward, but finally *The Vasculum* (suggested by me) was chosen. Many considered it rash to begin such an enterprise in war-time, but the result was our justification: if we had waited till the war was over we should have found a commencement impossible.

## NORTHUMBRIAN ANKERITES.

*The Mineralogical Magazine*, June, 1935, contains a paper on "Ankerites of the Northumberland Coalfield" by Dr. L. Hawkes and Dr. J. A. Smythe. The authors had before them both ankerites and ankeritic calcites, six lots in all, and have spared no pains to give the fullest analyses and other details. The illustrations are good and helpful.

## S.E. UNION OF SCIENTIFIC SOCIETIES.

Bulletins lxv and lxvi (June 26th and 28th, 1935) have been received. From the former one learns that the new Sussex Flora, edited by Lt.-Col. A. H. Wolley-Dod, is nearly ready for the

printer and will be published shortly. No. lxvi is concerned with the activities of the Insect Immigration Committee, and contains a list of the Recorders appointed by them; also a list of the Light Vessels and Lighthouses acting in co-operation with them. Readers will remember, I hope, that the Recorder for our area is Dr. F. C. Garrett, South View House, Alnmouth.

#### DEATH OF MR. J. R. JOHNSON.

The passing of Mr. Johnson removes one of the keenest of our local field naturalists. For long he has worked in close co-operation with Professor Harrison among the Lepidoptera, and the Professor has promised to write us an appreciation if he can manage it before we go to press.

#### THE LITTLE OWL.

A few years ago a Little Owl was taken from a rabbit-hole in this neighbourhood, but since then no other occurrence of the species has been noted hereabouts, and it has been seen elsewhere in our two counties, the record has escaped me. In some parts, at least, of southern England it seems to be plentiful enough, for a lady complains in *The Times* that there are four in her garden and she is consequently bereft of birds' nests. She does not say whether mice have ceased to consume her green peas and crocus corms. A Girton lady, after ten years' systematic examination of pellets and larders, declares that the little owl is a ground feeder, its staple food being rats, mice, and beetles; very rarely has she found remains of birds. A fire-eating Colonel with eight years of observation (how far systematic does not appear) tells of the remains of many birds, including a "half-grown pheasant." If it is not a deadly foe, he asks, why the frenzy of nesting birds when a Little Owl shows itself? I sympathise with the lady first named. I suffer the same bereavement, having no nesting birds save sparrows in clematis and polygonum, three pairs of swallows in the sheds, and perchance a blue tit in the high wall because I possess a fine cat, a mighty hunter. Alas, he has just taken all of the swallows which had a nest in the wood shed. But the rats that hollowed out my turnips, and the field mice that took toll of my peas and crocuses, are gone. Is Cornelius the cat to be

classed as vermin? If not, what about the Little Owl? -for the information of the sentimental I may add that Cornelius is perhaps the gentlest, kindest cat I ever knew.

#### MOBBING.

It seems to me that the Colonel's frenzied birds are not very reliable witnesses for the prosecution. When I hear a mother thrush screeching and scolding in a corner of the garden, I know there are fledgelings about and Cornelius is on the prowl. I also know that another cat, half the bulk and weight of Cornelius and of a very different hue, would be greeted in precisely the same way; so I am inclined to ask if the Colonel's birds are alarmed by the Little Owl, or by an Owl, though it happens to be a little one?

#### FLORA OF NORTHUMBERLAND AND DURHAM.

Professor Harrison is collecting material for a flora of the two counties, and will be glad to receive and report upon critical specimens or species, which should be addressed to Prof. J. W. Heslop Harrison, Armstrong College, Newcastle upon Tyne. I hope local botanists will fully appreciate the importance of this appeal and do their best to supply what is wanted.

#### ON THE EASTERN BORDER.

Berwickshire Naturalists met at the historic Wark-on-Tweed on July 18th. Heavy thunder showers made field work not quite impossible, but very unpleasant. I feel impelled, however, to record what is familiar to all passengers along the Border roads and lanes at this period of the year-the great abundance of the Rose-bay Willow-herb and the Meadow Geranium (*G. pratense*). On many roadsides one or other of them takes up the role of the Cow-parsley, now gone to seed, and overwhelms everything else. The homeward run was planned to include a sight of the College Burn at Kirknewton, first visited by me in 1890. At that date I have no note of the *Mimulus* (*M. langsdorfii*). Later it established itself above Kirknewton, and now forms great sheets there. In more recent years it has extended both up and down stream and the passer-by may see fine patches from the bridge at Kirknewton.



## THE BIRDS OF GOSFORTH PARK.

C. J. GENT.

Gosforth Park must have been an interesting bird haunt in bygone days, and it seems rather a pity that a complete list of the birds observed there has not been kept, as it would doubtless have been extensive and included many rare and interesting species. In the collection of birds in the Hancock Museum in Newcastle there is a specimen of a Lesser Spotted Woodpecker (*Dryobates minor comminutes*) obtained in Gosforth Park, as well as a Spoonbill (*Patalea l. leucorodia*) which was shot at the lake about 1874. In the Transactions of the Tyneside Naturalists' Field Club (1) there is a brief account by John Hancock of a visit to the lake in 1859, wherein he records most of the species of duck met with to-day as well as a pair of Ruffs (*Philomachus pugnax*). In his "Birds of Northumberland and Durham" (2) he also records the Wood Sandpiper (*Tringa glareola*) as having occurred at the lake. The late George Bolam in his recent "Catalogue of the Birds of Northumberland" (3) gives a record of the Hen Harrier for 1921.

There does not appear to be any other literature respecting this bird haunt with the exception of recent papers in *The Vasculum* by W. K. Richmond (4) and W. Raymond Philipson (5). There is also a very interesting chapter on the sanctuary in Mr. Richmond's recent book (6).

Some years ago the late Mr. Beck took over the shooting rights of the lake and the adjacent woodland with the idea of protecting the birds and making the area a bird sanctuary, and, when in 1929 he relinquished the sporting rights owing to ill-health, they were taken over by the members of the Northumberland and Durham Natural History Society.

The estate of Gosforth Park, which is at present owned by the Gosforth Park Racing Company, lies on the east side of the Great North Road about three miles north of Newcastle upon Tyne and is about 790 acres in extent. The portion preserved as a sanctuary is the south-eastern corner in which the lake of over

50 acres is situated. About a third of the latter consists of reedbed and it is bounded on three sides by woodland. The estate was originally heath and was planted with mixed woodland about 1760.

The following list of birds is drawn up mainly as a result of observations made during personal visits to the sanctuary during the last seven or eight years, but also includes a number of records made by other observers, and, in this connection, I am especially indebted to Messrs. W. K. Richmond and W. Raymond Philipson, who have furnished me with lists of the birds recorded by them as well as other data.

Carrion Crow (*Corvus c. corone*).-A rather too plentiful resident.

Hooded Crow (*C. c. cornix*).-Occasional winter visitor.

Rook (*C. f. frugilegus*).-Resident.

Jackdaw (*C. monedula spermolegus*).-Resident.

Magpie (*Pica pica pica*).-Has been seen several times (A. F. Park) and was reported by the keeper to have nested two years ago.

Jay (*Garrulus g. glandarius*).-Until recently was only met with during the winter months, but is now a resident and probably breeds.

Starling (*Sturnus v. vulgaris*).-Resident, large numbers coming nightly to roost in the reeds about the lake.

Greenfinch (*Chloris c. chloris*).-Resident.

House-sparrow (*Passer d. domesticus*).-Resident.

Chaffinch (*Fringilla c. coelebs*).-Resident.

Brambling (*F. montifringilla*).-I have no record of its occurring actually in the sanctuary, but a pair were observed at the farm just south of Gosforth Park on February 24th, this year.

Linnet (*Acanthis c. cannabina*).-Resident.

Lesser Redpoll (*Acanthis linaria cabaret*).-Winter visitor (W.K.R.).

Cornbunting (*Emberiza c. calandra*).~Resident.

Yellow Bunting (*E. c. citrinella*).-Resident.

Reed Bunting (*Emberiza s. schoeniclus*).-Chiefly a summer resident although odd birds appear to winter.

- Skylark (*Alauda a. arvensis*).-Resident.
- Pied Wagtail (*Motacilla alba varrellii*).-Occasional visitor to the lake.
- Tree Pipit (*Anthus t. trivialis*).-Summer resident.
- Meadow Pipit (*A. pratensis*).-Resident.
- Tree Creeper (*Certhia familiaris britannica*).-Resident.
- Goldcrest (*Regulus regulus anglorum*).-Often occurs in large numbers with the wandering parties of tits during the winter months.
- Great Tit (*Parus major newtoni*).-Resident.
- Coal Tit (*P. ater britannicus*).-Resident.
- Marsh Tit (*P. palustris dresseri*).-Resident.
- Blue Tit (*P. coeruleus obscurus*).-Resident.
- Long-tailed Tit (*Aegithalos caudatus roseus*).-Usually occurs during the winter months and may nest, as I came across a family party on August 2nd, 1934.
- Spotted Flycatcher (*Muscicapa s. striata*).-Summer resident (W.R.P.).
- Pied Flycatcher (*Ficedula h. hypoleuca*).-Recorded once by Mr. P. Regnart.
- Whitethroat (*Sylvia c. communis*).-Summer resident.
- Garden Warbler (*Sylvia borin*).-Summer resident.
- Blackcap (*Sylvia a. atricapilla*).-Summer resident (W.K.R. and W.R.P.).
- Nested some years ago (A.F.P.).
- Sedge Warbler (*Acrocephalus schoenobaenus*).-Plentiful summer resident.
- Willow Warbler (*Phylloscopus t. trochilus*).-Plentiful summer resident.
- Wood Warbler (*Phylloscopus s. sibilatrix*).-Summer resident, several pairs.
- Chiff-chaff (*Phylloscopus c. collybita*).-Mr. G. W. Temperley informs me that he has recorded this bird on one or two occasions.
- Mistle-thrush (*Turdus v. viscivorus*).-Resident.
- Song-thrush (*T. philomelos clarkei*).-Resident.
- Redwing (*T. musicus*).-Winter visitor.
- Fieldfare (*T. pilaris*).-Winter visitor.
- Blackbird (*T. m. merula*).-Resident.

- Redstart (*P. p. phoenicurus*).-Recorded occasionally in spring and autumn, apparently on passage.
- Redbreast (*Erithacus rubecula melophilus*).-Resident.
- Stonechat (*Saxicola torquata hibernans*).-Recorded by Mr. W. R. Philipson.
- Whinchat (*Saxicola r. rubetra*).-Occasional summer resident. Nested 1926.
- Wheatear (*OE. oe. oenanthe*).-Occasionally met with during spring apparently on migration.
- Hedgesparrow (*Prunella modularis occidentalis*).-Resident.
- Wren (*T. t. troglodytes*).-Resident.
- Swallow (*Hirundo r. rustica*).-Summer resident.
- House-martin (*Delichon u. urbica*).-Summer visitor.
- Sand Martin (*R. r. riparia*).-Usually noted on spring passage.
- Great Spotted Woodpecker (*Dryobates major anglicus*).- Resident.
- Cuckoo (*Cuculus c. canorus*).-Summer resident.
- Swift (*Micropus a. apus*).-Summer visitor. Very often large numbers hawking over lake on an evening.
- Kingfisher (*Alcedo atthis ispida*).-Frequent visitor to lake. Appears to be resident in the vicinity.
- Long-eared Owl (*Asio o. otus*).-Resident.
- Short-eared Owl (*Asio f. flammeus*).-Recorded November, 1928 (W.K.R.).
- Tawny Owl (*Strix aluco sylvatica*).-Resident.
- Montague's Harrier (*Circus pygargus*).-Recorded October 11th, 1931 (W.K.R.). A hawk of whose identity I was uncertain was seen by me on October 18th, 1931, presumably the same bird.
- Rough-legged Buzzard (*Buteo l. lagopus*).-One frequented woods to north of lake during March, 1929 (See *Vasculum*, XV, p. 75).
- Sparrow Hawk (*Accipiter n. nisus*).-Resident.
- Peregrine Falcon (*Falco p. peregrinus*).-Recorded several times (W.R P )
- Kestrel (*Falco t. tinnunculus*).-Resident.
- Bean Goose (*Anser f. fabilis*).-A single bird in January, 1930 (W.K.R.).

- Whooper Swan (*Cygnus cygnus*).-One record of an immature bird (W.K.R.).
- Bewick's Swan (*C. b. bewickii*).-Two February, 1931 (W.K.R.).
- Mute Swan (*Cygnus olor*).-Resident.
- Mallard (*Anas p. platyrhynchos*).-Resident.
- Garganey (*Q. querquedula*).-Several records (See *Vasculum*, XV, pp. 76 and 154, and XIX, p. 130).
- Teal (*Querquedula c. crecca*).-Resident.
- Widgeon (*Mareca penelope*).-Winter resident.
- Shoveler (*Spatula clypeata*).-Present in varying numbers, most plentiful on spring and autumn passage.
- Pintail (*Dafila a. acuta*).-Single birds in October or March/April (W.K.R.).
- Pochard (*Nyroca f. ferina*).-Winter visitor.
- Tufted Duck (*N. fuligula*).-Resident.
- Golden Eye (*Glaucionetta c. clangula*).-Winter visitor.
- Goosander (*Mergus m. merganser*).-Occasional winter visitor (W.K.R.).
- Smew (*Mergellus albellus*).-Duck, January 10th, 1927 (W.R.P.) (*Vasculum*, XIX, p. 130).
- Heron (*Ardea c. cinerea*).-Occasional visitor.
- Woodcock (*Scolopax r. rusticola*).-Resident. Has nested (W.R.P.).
- Common Snipe (*Capella g. gallinago*). Occasional visitor.
- Redshank (*Tringa t. totanus*).-Occasional visitor.
- Common Sandpiper (*T. hypoleucos*).-A pair seen August 30th, 1931.
- Curlew (*Numenius a. arquata*).-Nests annually in the field to the south of the lake.
- Lapwing (*Vanellus vanellus*).-Resident.
- Common Gull (*Larus c. canus*).-Recorded by W.R.P.
- Herring Gull (*L. a. argentatus*).-Chiefly a winter visitor.
- Lesser Blackbacked Gull (*L. fuscus affinis*).-Usually a small party present except in mid-winter.
- Black-headed Gull (*L. r. ridibundus*).-Nested 1928 and 1929.
- Great Crested Grebe (*Podiceps c. cristatus*).-Recorded by W.R.P.

Little Grebe (*P. r. ruficollis*).-Resident.  
 Water Rail (*Rallus a. aquaticus*).-Appears to be a resident.  
 Corn-Crake (*Crex crex*) .-Summer resident.  
 Moorhen (*Gallinula c. chloropus*).-Resident.  
 Coot (*Fulica a. atra*).-Resident.  
 Stockdove (*Columba aenas*).-Resident.  
 Wood Pigeon (*Columba p. palumbus*).-Resident.  
 Pheasant (*Phasianus colchicus*).-Resident.  
 Partridge (*Perdix p. perdix*).

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- 4-Distribution of Wild Fowl on Gosforth Park Lake.-W. K. Richmond (*Vasculum*, Vol. XVII., p. 61).
- 5-Notes on the Migration of Duck at Gosforth Park Lake.-W. Raymond Philipson. (*Vasculum*, Vol. XIX., p. 129.)
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#### A NIGHT OUT.

W. ELTRINGHAM.

For a few summers past I have made a practice of paying at least one visit to a certain out of the way spot to hear the birds of night and dawn, and am now ready to repeat the experience. The chosen spot is fixed by the fact that there one may hear both the Night-jar and the Grasshopper Warbler; but Cuckoo, Corncrake, Curlew, Peewit, Pheasant, Partridge, Black-bird, Greybird, Pipits, Finches, Tits, Warblers and many others may be seen and heard at dusk. Then also the Grasshopper Warbler joins in with his riddle, but it is nearly dark before the Night-Jar begins. If you liken the music of the Warbler to that of the violin, then you may hear the quality of the 'cello in that of the Night-jar, though it adds a peculiar purring turn which belongs to itself alone.

Cuckoos, Corncrakes. and Wheatears are in greatly diminished numbers this year, and this added to a shortage of Redstarts and Whinchats must be a matter of concern to bird lovers. As a set-off to this I have been privileged to see two pairs of Gold- finches. One pair had eggs in an orchard but left them during a cold spell. Another item goes on the credit side when I am asked, "What are these? " and see a couple of Woodcock's eggs which a girl had picked up in a casual walk in a wood, while I who would gladly have made their acquaintance with telescope or camera had failed entirely to locate a nest after much seeking.

As darkness falls there comes with it a feeling of morbidness which it is not easy to cast off. The Spirit of the scene seems to cry out, "I was here long before you came and will be here long after you are gone. . . ." It is well to go forward to the fell which lies a mile ahead. After passing a sleeping farm I reach the fell at last and note the spot where years ago I had an experience with a mother Red Grouse and her chicks. The latter were so small that I had no difficulty in picking two of them up, one in each hand. Looking around after a brief examination of them, I realised that the rest had all disappeared. Presently the mother came crawling through the heather to within three or four feet of me and begged me to give up the youngsters; which of course I did.

Over on that next hill I found a Curlew's nest last year, and paid it a second visit at a most interesting time. In the nest one young one lay sprawling, more like a miniature Plesiosaurus than a bird, while the only other occupant was still in the egg which moved uncannily in the nest.

Here I make a pause, though now and then it is necessary to pace about a little to ward off cramp and cold. It is not quite dark, for it is light enough in the north to show the position of the sun. . . . As the feeling of aloneness grows, it is curious to note how the mind divides itself into two or even three parts. The emotional part suggests one thing, the reasonable another, while a more judicious part hears the pleadings of these advocates and makes decision .... If a gamekeeper sees me here he will probably mistake me for a poacher; and if a poacher sees me

he may take me for a keeper, so that neither will love me at first sight. But though one must admit a sort of fear or apprehension, it is not on that account, but something more primitive and somehow I feel that I ought not to let myself be affected in that way. I have lived many years by myself, and as a youngster used to experiment with fear in the deserted galleries of a coal mine-would put out my light and listen to the silence-listen till it became audible-listen till it roared into nearness and threatened to swamp the small spark of consciousness. Then I had hastily to scratch a light and sing a verse of "Uncle Ned" or beat on an empty tub to scare away the demon I had conjured up. I feel that I would be more comfortable with a lump of flint in my hand, as any primitive man might have felt.

There is still much that he and we could have in common. The pelting rain, the blinding snow, the fear of a thunderstorm, well as the music of the birds, would be to him just what they are to us, as also the huge umbrella of the stars overhead. The planets Jupiter and Venus are lowering to the horizon, one in the south-west, the other in the north-west, and the first magnitude stars are showing. If as has been suggested there are realms or worlds that are "infinitely better" or "infinitely worse" revolving round those stars or suns, among them may be one of similar development to our own-where the scientists meet once year; where more ordinary folk go to football matches or cinemas in the winter; where they have a Wyatt whose thumb is a matter for splashy headings in the press. There may be a solitary individual sitting on a fell top wondering what it is all about, as I do here. I send him a greeting-Cheerio! . . . There no answer, nor could there be; for even if my greeting travels quickly as light or wireless and the planet's primary is comparatively near it may take my message ten years to reach its destination and the reply a like period. Twenty years hence it would be due: twenty years hence--Ah me!

I feel all the more lonely now and memory recalls the story of the homeward bound London ship which sailed over the site of that port and found only deep water. What if I indulge in an excursion in space and return to find that the earth has



moved on, and I have "missed the bus"! I had better wake up that other part of me. He will surely scorn the suggestions of his "learned brother" and fellow-boarder and advise me to dig under the turf.

Underneath me lies a six-foot seam and the covering is at times no more than a few inches, all that is left to represent some millions of years, though the thickness must have been enormously greater at one time. . . . Coal! Here is both romance and realism-the romance of the earth as it was ten million years ago; the romance of the development of the powers of steam; the romance of the production of iron and steel.

It is said that at one period of Roman history the forces of Christianity and of Mithraism were about equal, and none could say which would prevail in the future. If the balance had dipped otherwise than it did, we might have been fellow sun-worshippers with the Parsees and in our northern clime could have woven a nature myth around coal as a centre, setting forth how the great Sun spirit, aware that he must for a while descend to some tomb or Avernus below the southern rim, in coal left part of his body and spirit, so that his children might successfully combat the powers of cold and darkness during his absence.

I have built me an image, and following many thousands of precedents wish it to be something more than it is. Yet it is true that all of us in our appreciation of a coal fire on a cold winter's day are in a measure sun-worshippers. Yet with all this and more, the general attitude to coal is like that of the newly-rich to the shop or factory out of which they have done so well; it is the last thing they care to hear about. So it is not just mines and miners that are commonly held in low esteem, but even the sea-going craft that carry the coal are scornfully called "dirty colliers." There is more glamour about a spick and span dope smuggler than about an honest tramp carrying thousands of tons of preserved sunshine.

A price must be paid for the precious benefits of coal, and one item in the bill of costs is the disease called Nystagmus, which costs millions of pounds and wrecks many lives, simply because

the conditions under which the coal is acquired are not (or were not) familiar. It may seem a far cry from the scowl of a miner and Nystagmus to the stalked eyes of some of the inhabitants of the lower sea-depths, but they are all linked together by the fact that they all are reactions to abnormal conditions of light.

Dawn is at hand though the sun will not yet appear. Up to mid-June this year he has not been gracious; offended perhaps by the spiritist philosophers who deny that we are his children and declare that he himself-despite the evidence of coal-is a mere product of our consciousness. Surely such people have had no direct contact with the earth and have little regard for the experience of those who have. Yet the ignoring of such experience is as illogical as to ignore items of income or items of outlay in book-keeping. If Plato had had a plough, a pick, or a shovel in his hands for two years or so, would he have been in such a maze as to what was substance and what was shadow? And some of our academic philosophers may be suffering from the same disability.

Holidays are with us, a well-established institution. Wherein lies their efficacy? Surely it is that external things, otherwise called environment, play a lively part in mental functions; and it seems very strange that they who deny it should be among those who enjoy (or need?) the greatest allowance of holiday!

Not so very long ago the geocentric idea was decried as parochial; is the psychocentric notion taking its place? Much satire was expended on the German philosopher who evolved a camel from his inner consciousness; now we are told that the cosmos is evolved by the same process. If the ultimate analysis of the atom proves to us that matter is non-existent, I fancy we shall still have to live as if it did exist!

One of the commonest minor mishaps in a coal mine is when a Worker involuntarily knocks his head against some millions of tons of overhead roof. A facetious bystander, familiar with the "jaaping" of Easter eggs, remarks, "Bottom egg!" The respect for solid matter engendered by such experience has its counterpart in due regard for legislative robots and belisha

beacons. We can still be thankful if legislative action in general conforms more to common sense than to the dictates of any "city of philosophers."

The Sun is now rising and the birds greet him with infinite variety of song. Their "Hymn to the Sun" is no copy from a Russian composer; rather he in his wisdom will follow theirs with which they have greeted the great Cause for a few million years.

### **FRAMWELLGATE MOOR CARR.**

BENJAMIN MILLARD GRIFFITHS.

The Carr is situated eastward of the village of Framwellgate Moor, near Durham City. It lies at a height of 300 feet above sea level, and is flanked on part of its eastern side by the pit heap of the old Framwellgate Moor colliery, and is crossed by the embankment of the old wagon-way. The pit was sunk in 1838, and was closed down about 1925. The carr consists of two parts, the Northern or Upper Carr lying slightly above 300 feet, and the Southern or Lower Carr lying slightly below 300 feet.

The Southern Carr when viewed southward from the old wagon way, appears as a rough pasture, fringed with whins on the east and south, and showing a conspicuous dark patch of heathery ground occupying most of the northern quarter of the area. A narrow area of rushes lies at the foot of the wagon way, and is separated from the heathery area by a broad field path. If we descend from the wagon way on to the rushy area, we find that the rushes (*Juncus effusus*) are growing on dark brown peat, which soundings show to be some six feet deep, and we see here and there old pine stumps showing above the surface. There are the tops of at least seven stumps visible, and ten more can be detected in the field path. When we cross the path, we find ourselves on typical heath grassland of Mat Grass (*Nardus stricta*), Sheeps Fescue (*Festuca ovina*), and Wavy Hair Grass (*Aira flexuosa*), together with Heath Bedstraw (*Galium saxatile*) and Tormentil (*Potentilla Tormentilla*). The heath grassland is here

a narrow band between the path and the heathery area, but on east and west it broadens out and joins with the rest of the rough pasture to the south.

The heathery area consists of Ling (*Calluna vulgaris*) mixed with Crossleaved Heath (*Erica tetralix*) and small patches of Purple Moor Grass (*Molinia caerulea*). On the edge of the heather are patches of Creeping Willow (*Salix repens*), and in the heather are a few small hollows in the peat where water accumulates and Manyheaded Cotton Grass (*Eriophorum Polystachion*) grows scantily, with rare occurrences of the Singleheaded Cotton Grass (*E. vaginatum*). On the south east edge, Marsh Potentil (*Comarum palustre*) and Marsh Violet (*Viola palustris*) grow among the Creeping Willow. No less than 37 pine stumps are to be seen in the peat of the heathery area.

There are evidently three distinct floras here. First the vanished pine forest of which at least 54 tree-stumps remain; second, the moor-flora of Cotton Grasses, Crossleaved Heath and Purple Moorgrass, which grew on the peat which overwhelmed the pine forest; and thirdly the heath-flora of Ling and heath-grasses, which in turn is encroaching on the moor-flora.

The Upper or Northern Carr when viewed westward from the pit heap is seen as a more or less triangular depression bounded on the east by the spoil-heap and on the north and east by whin-covered slopes. The bog-land character is rather better preserved than in the Southern Carr, and Ling is less conspicuous. There is an elongated patch of Ling, mixed with Cross-leaved Heath, on the east side, but the major part of the carr is occupied by Purple Moor Grass and Cross-leaved Heath, together with a considerable number of patches of the two kinds of Cotton-grasses. At least 9 pine-stumps can be seen in the peat. In all parts, however, the heath flora of Mat Grass, Sheeps Fescue, Wavy Hair Grass, and the Heath Bedstraw, is invading the area, and competing with and replacing the old bog-flora.

The most remarkable plant in the Upper Carr is the Cranberry (*Vaccinium Oxycoccus*), which occurs at one spot in the bog. It is not recorded by Winch, Thornhill and Waugh in their "Botanists' Guide," 1805, though several other species of plants

are given from the nearby Durham Moor. It is given by Winch in his "Flora," 1838, p. 25, and it is also given in the list of plants in Ormsby's "Sketches of Durham," 1846, p. 213. The occurrence of cranberry at a level as low as 300 feet is by no means usual, and probably indicates that the bog-conditions have prevailed from a remote period.

The Upper Carr therefore shows a flora similar to that of the Lower, but is rather more bog-land in character. Both carrs started as small lakes in post-glacial times, and have passed through many phases of peat-bog conditions, alternating with drier periods when forest conditions prevailed. To-day we can see the relics of three such phases, namely, ancient peat-bog, ancient pine forest, and recent peat bog, and the last is now passing into the heath conditions of the present time.

#### **RANDOM NOTES ON SPRINGTAILS (COLLEMBOLA) IN THE NORTH OF ENGLAND.**

RICHARD S. BAGNALL, D.Sc., F.R.S.E.

After many years I have turned again to the study of Springtails, and more particularly of the Onychiurids, in which family I have demonstrated an unexpected and exceptionally rich fauna. Some thirty new species have so far been discovered and these are being described in my "Notes on British Collembola" and "The British Tullbergiinae" now appearing in the *Entomologists' Monthly Magazine*, and "Contributions towards a Knowledge of the Scottish Onychiuridae" in the *Scottish Naturalist*. With a view to building up an account of the Apterygote Insects of the North of England I propose to bring together my old and recent records. Those species which Womersley included in his tables without acknowledgment from my manuscript list (as detailed elsewhere) I propose to cite as "Bagnall MSS. in Womersley 1930."

In the following pages *Achorutes socialis* Uz., *Xenylla longispina* Uz., *Onychiurus moniezi* sp. n. and *O. stachi* sp. n. are brought forward as British.

*Achorutes socialis* Uzel 1890.

*Hypogastrura socialis* Bagnall MSS. in Womersley 1930, Proc. Roy. Irish Acad., XXXIX, Sect. B., No. II, p. 164.

Apart from Uzel 1890 and many European authors since that date, this species is closely described and figured by Folsom (1916, p.484, pl. 7, fig. 1; pl. 10, figs. 42-46, and pl. II, figs. 47-50), the species being common to Europe and North America.

It is about 2.0 mm. in length and of a uniform dark indigo blue in colour and comes into a small section characterised by the dentes being furnished dorsally with a number of large teeth. It may be separated at once from the North American *harveyi* Fols. and the North European *frigidus* Axel. (possibly synonymous with *harveyi*) by its small anal horns.

Lintner's *diversiceps* 1896 is a synonym and Schaffer's *spinifer* 1896 a colour variety of *socialis*. Folsom has further shown that this is the Snow-flea (*A. nivicola*) of Fitch 1847 and Folsom 1902.

I first found this species on the slopes of Cheviot in 1912 and in 1925 rediscovered it on Ben More. First British records.

*Xenylla longispina* Uzel.

*Xenylla longispina* Bagnall MSS. in Womersley 1930, I.c. p. 168.

This fine species falls with *humicola* (O.F.) in the section wherein the mucros are distinctly separated from the dentes and is at once distinguished by the comparatively large curved AH and the two very long tenent hairs of each foot which over-reach the tip of the claw.

I have known this species since 1908 when I found it on Juniper at Nethy Bridge; apart from later Scottish records I have since found it in Northumberland (Wooler, one example in Sphagnum, 4, vi, (2). First British records.

Genus *Anuridella* Willem.

There are three species of this genus now known all of which have been found in this country. They are Anurida-like in form, but *in situ* they superficially resemble species of Onychiuridae. The species are truly halophilous and are to be found between tide marks living gregariously under more or less deeply embedded stones. *A. submarina* was originally described from the coast near

Whitburn, but I have recently found it in the Forth area. The species may be distinguished by means of the following key:-

1. Species with all legs normal. Maxilla without apical projecting point. *A. marina* Will.

Species having outer basal part of the hind leg furnished with a prominent protuberance.

2. Size larger, broader and of *Onychiurus* facies; legs normally long. Head of maxilla furnished with medial projecting point. Last body segment unusually long. *A. calcarata* Den:

Size smaller and more slender and of *Tullbergi* rather than *Onychiurus* facies; legs very short, stout. Maxilla simple as in *marina* and last abdominal segment short. *A. submarina* Bagn.

*Anuridella marina* Will.

Willem 1906, *Mem. Soc. Ent. Belg.*, xii, p.247, pl.1; Bagnall. 1934, *Ent. Mo. Mag.*, lxx, p. 275

Although only recently brought forward as British, I actually recognised this form many years ago from the Northumberland coast between St. Marys Island and Seaton Sluice and in more recent years re-discovered it on the Essex coast. It is common the Forth coast near Edinburgh and not rare at Alnmouth (ii, 35). I also took isolated examples on the Durham coast the mouth of Ryhope Dene and on the Yorkshire coast near Flamborough Head in June, 1934.

*Anuridella submarina* Bagn.

Bagnall 1934, l.c., lxx, p. 276, fig. 11.

This species is smaller and more slender than *marina* suggestive of a *Tullbergi* in its general appearance and movements. Whereas *A. marina* is usually found under stones embedded in a very fine sand, *submarina* is to be found in a coarse gritty sand. Found at Whitburn, Co. Durham, vi , ,34 and re-discovered this year on the Forth coast near Edinburgh.

Genus *Onychiurus* Gerv.

In working out the halophilous fauna of a small stretch coast near Edinburgh I have been amazed to find several species

of *Onychiurus*, viz., *O. scoticus* Bagn., *O. daviesi* Bagn., *O. caledonicus* Bagn., *O. littoralis* Bagn., *O. Tullbergi* Bagn and previously-known *O. debilis* (Mon.). Three of these have the previously occurred on the North East coast and are recorded below. Of the other species now recorded *O. flavescens* Bagn. appears to be a true hill-species and is readily recognised by its colour.

(a) *groenlandicus* Group.

*Onychiurus groenlandicus* var. *affinis* (Agr.).

Under bark of coniferous trees, upper Derwent, Tynedale, North Tyne and Wooler district, 1912-1913.

*O. absoloni* (Börn).

Börner 1901, Zool. Anz., xxiv, p. 422; Bagnall 1935, *Scot. Nat.*, p. 112.

A smaller species than *affinis*, but of similar type and habitat. Under bark of deciduous trees (birch, beech and ash), Gibside, Co. Durham, 1912-13.

(b) *scoticus* Group.

*Onychiurus scoticus* Bagn.

Bagnall 1935, *Ent. Mo. Mag.*, lxxi, p. 63; *Scot. Nat.*, p. 112.

Common on the Forth coast, occasionally inland. Single examples on the North East coast at Flamborough, vi, 34, Ryhope, vi, 34, and Alhnrnouth, ii, 35.

(c) *armatus* Group.

*Onychiurus caledonicus* Bagn.

Bagnall 1935, *Ent. Mo. Mag.*, lxxi, p. 61; *Scot. Nat.*, p. 113.

Found rarely on the Forth coast and two examples only recorded from the Yorkshire coast near Flamborough, viii, 34. This and two other halophilous species, *daviesi* and *littoralis*, fall in the *octapunctatus* group wherein four pseudocelli are to be found at the base of each antenna; a key to the species is given in *Scot. Nat.*, 1935, pp. 112-113.

*Onychiurus flavescens* Bagn.

Bagnall 1935, *Scot. Nat.*, p. 115.

A largish species varying in colour from primrose to daffodil yellow with antennae and legs white.



Described from the Pentlands where it is found, though rarely, on Corstorphine hill. Taken (at 2,000-3,400 feet) in North Wales by Davies.

A single specimen found near the summit of Cheviot in May 1913, is referable to this species; it is locally common in Gibside Woods, xii, 34.

The three species of the *debilis* group briefly characterised below will be described in detail in a later paper.

*Onychiurus debilis* (Mon.) Denis *nec* Bagnall.

Synn. *neglectus* Schaff. (1896), *litoreus* Fols. (1917), and *evansi* Bagn.

This little species is a true halophile and apparently of wide distribution. The species I brought forward as *debilis* (*Ent. Mo. Mag.*, lxxi, p. 62) is a small form coming near *armatus*, of which I hope to make a study in the near future. I can therefore only definitely record *debilis* from the Forth area and Alnmouth (ii, 35)

*Onychiurus moniezi* sp. n.

A small species of the *debilis* group having the same type of post-antennal organ and of claw. The antennal organ iii consists of 4 stumpy papillae and 4 guard setae; the PAO is open-ovate in form with about 20 vesicles which touch each other laterally; the pseudocelli at hind margin of head number 2-2, but are unusually widely spaced. The empodium of foot consists almost entirely the basal lamella, the stumpy apex being produced very slightly beyond plate.

DURHAM, one example only, Gibside, xii, 34

*Onychiurus stachi* sp. n.

Another minute species having the same form of PAO as *debilis* and *moniezi*, but in which the empodium of claw is lamellate. The antennal organ iii consists of 5 papillae and 5 guard setae. The pseudocelli of the hind margin of head number 2-2 and are somewhat obliquely placed. The dorsal chaetotaxy of abdomen in relation to the pseudocelli is distinctive and one pair of bristles on each segment very long. Anal horns long and slender, set on a pair of very short, well-separated papillae.

Edinburgh, one example in a field, iv, 35

*Tetracanthella wahlgreni* Axel.

Bagnall 1914, *Journ. Econ. Biol.*, ix, p. 7, figs. 5 and 6: Davies 1934, *Ent. Mo. Mag.*, lxx, p. 92, *North Western Nat.*, p. 119

This species is discussed, figured and diagnosed in the above cited papers. It has only recently been brought forward as British by Davies who has taken it plentifully in North Wales in soil from under stones and moss at heights of from 2,000 to 3,400 feet. It is represented in an important collection of soil-collembola made by Kendall in the Pentlands (1,000-1,250 feet), and I have a single poorly preserved specimen found with *T. pilosa* near the summit of Cheviot at c. 2,500 ft. in May, 1913.

## THE SOCIETIES.

### NORTHERN NATURALISTS' UNION.

The 22nd field meeting was held at Blanchland on June 15th and was very successful, over 40 members attending and the weather being delightful. Nineteen members took the whole day and after exploring the river bank, where some good mosses and liverworts were found, were most hospitably entertained to lunch at Riddlehamhope by Mr. and Mrs. J. C. Forster. The wet shady banks of the Beldon Burn near Riddlehamhope are favourable to the luxuriant growth of Bryophytes; among those not previously reported from the Northumbrian side Miss Lobley found the following mosses:- *Dicranella squarrosa*, *Weissia rupestris*, *W. verticillata*, *Zygodon mougeatii*, *Webera broligera*, *Mnium stellare*, *Plagiothecium pulchellum*, *Hyocomium flagellare*, *Hypnum ochraceum* and *H. commutatum*. Among Hepatics were *Aplozia riparia*, *A. crenulata*, *Scapania nemorosa*, *Blepharostoma trichophyllum* and *Madotheca platyphylla*.

After lunch the party divided, Mr. Marshall leading one section first to the top of the hill to see the view, and then down to the river where a beautiful field of Globe Flower was discovered, as well as the Beech and Oak ferns, while Mr. Forster lead the other to study the evidence of Ice Age movement. The numbers grew in the afternoon, and the later comers explored the lower part of

the valley, especially Gibraltar point, and noted that the oak *Q. sessiliflora*, was unusually backward. The May Lily was in good condition; a meadow was full of the pansy, *Viola lutea*, of every shade from sulphur yellow to pure mauve.

Insects were scarce, as they have been in most places this season, and the lepidopterists only reported the Emperor moth and the Wood Tiger, but Mr. S. Campbell was more fortunate with the beetles, noting *Cicindelia campestris*, *Anchomenus albipes*, *Agathidium nigripenne*, *Rhizophagus bipustulatus*, *Omalium pusillum*, *Geotrupes vernalis*, *Phyllobius oblongus*, *Dianus coerulescens*, *Geodromicus nigrita*, *Otiorrhynchus picipes* and *Phyllodecta vulgatissima*.

As usual warm thanks were due to Mr. W. Marshall, who had arranged for free access everywhere and who was indefatigable in seeing that everyone found his way to the right place

#### WALLIS CLUB.

April 1st.-Mr. B. Temperley gave a description of experiences in South Africa, showing a large number of exhibits of its wild life. Mr. B. Gibbs showed a large tooth and magician's knuckle bone from the same regions. Mr. G. W. Temperley announced that he could record a fresh area Northumberland for the Roebuck.

April 29th.-Dr. K. B. Blackburn exhibited a number of living plants collected by herself in the Balkans, and Mrs. Blackburn the Green Hellebore from Cutherstone. Miss Ritson showed tawny owl's egg, Mr. Blackburn a very large specimen of *Helix pomatia* from Trieste, and Mr. G. W. Temperley an instructive series of birds' wings.

May 27th.-Dr. K. B. Blackburn showed living specimens of *Ceramium acanthonoton* collected at the Coast when the club held its outing there on May 25th. Other specimens of the marine fauna were also shown and discussed.

June 27th.-Dr. K. B. Blackburn showed specimens of the following plants, all collected by Miss Henderson at Long Crag near Rothbury:-*Cornus suecica*, *Quercus sessiliflora*, and *Q. pedunculata*.

## DARLINGTON AND TEESDALE NATURALISTS' FIELD CLUB.

The Annual Meeting was held on April 30th. The President, Mr John E. Nowers, in the chair. The report of the council showed that the club had another successful year, the average attendance at the excursions being 14. During the summer 23 indoor meetings were held, average attendance 26; the winter meetings were 25 with an average attendance of 50. Seventeen new members were elected.

The Hon. Treasurer's report showed a balance of £11 1s. 5d. The librarian reported 573 books now in the library. The archaeological organiser, H. D. Pritchett, in his report stated that a number of the excursions were of considerable interest to archaeologists. Mr. J. E. Nowers, botanical organiser, in his report mentioned several excursions as of botanical interest. About 50 sheets of specimens had been added to the herbarium, many by himself. Mr. A. Stainthorpe said that the ornithological section had done good work during the past year. The phenological records had been again kept by Mr. J. B. Nicholson. The retiring president, Mr. J. E. Nowers, thanked all the officers for their assistance in carrying on the work of the club during the past year. The following officers were elected for the ensuing year: President, E. B. Pinckney; vice-presidents, J. Broadhead, J. Bowker, C. L. Drury, H. A. Inness, G. H. Nichols, Mrs. Holland, J. B. Nicholson, J. E. Nowers, A. Stainthorpe, R. Watkin, W. R. Wooler, H. D. Pritchett; treasurer, R. H. Sargent; secretary, J. E. Nowers; correspondence secretary, R. Watkin; excursion secretary, A. Stainthorpe; librarian, H. D. Pritchett; curators, B. R. Lucas and A. Morton: sectional organisers- Archaeology, H. D. Pritchett; Botany, J. E. Nowers; Footpaths, C. P. Nicholson; Ornithology, A. Stainthorpe; Entomology, W. W. Allen; Members of Council, E. S. Ayton, J. Burgess, Mrs. G. L. Scurr, Mrs. Hindle, C. W. Murray, and H. F. Webster.

Weekly indoor meetings.-May 7th, Mr. J. E. Nowers exhibited a series of microscopic slides of pollen of spring flowers and explained the action of fertilization. Mr. A. Stainthorpe spoke of the arrival of migratory birds. Swallow seen April 12th,

Willow Warbler April 14th, House Martin, Sand Martin, Sandpiper and Chiffchaff April 24th. Cuckoo (heard), Tree Pipit April 25th, Wood Wren, Spotted Flycatcher and Swift May 3rd.

On May 14th Mr. J. E. Nowers read some notes on the three British snakes and the slow-worm. Miss K. B. Smith spoke of seeing three ringed snakes near Richmond on the previous Saturday; the two smaller were fighting. Mr. A. Stainthorpe exhibited a chaffinch nest that had been decorated with confetti, also reported the Corncrake at Scotch Corner May 11th and Darlington May 12<sup>th</sup>; Siskins at High Coniscliffe on May 9th.

The first excursion of the season took place on May 11th to Brusselton, Bell Howe and Hughington. A portion of the old Stockton and Darlington Railway was inspected and the celebrated Brusselton Folly visited. At Bell Howe the rings of possible prehistoric entrenchments were examined. Hughington Church was visited, members were kindly entertained to tea by the vicar, the Rev. W. H. McLean.

The annual all-night walk for bird song at dawn took place on May 18th-19th. Eleven members left by the last bus for Richmond on Saturday evening. The route was through Whitecliffe Woods, to Marske Downham Bridge and Bellaby Moor; it was a bright moonlight night and very cold. The minimum temperature registered was 24° F. at 5 a.m. The following are, the times at which various birds were heard:-Tawny Owl and Corncrake at 12.15 a.m.; Woodcock at 3.15-this is exactly the same time as the last three years.

Skylark	3.29	last year	5.30	this year
Curlew	3.35	last year	4.55	this year
Robin	3.44	last year	3.50	this year
Cuckoo	3.46	last year	4.10	this year
Thrush	3.47	last year	3.50	this year
Blackbird	3.49	last year	3.55	this year
Garden Warbler	3.51	last year	4.16	this year
Pheasant	4.12	last year	3.40	this year
Heron      heard	-		4.10	this year
calling				
Rook	-		4.40	this year
Herring Gull	-		4.49	this year

A party of Swifts seen, 7-0-the first party seen this year. The total number of birds noted was 34 against 41 last year. The song of the birds was not so good as last year, doubtless owing to the cold. Mr. Stainthorpe was leader of the party.

The great damage done by the severe frost on the night of May 18th-19th was spoken of by Mr. H. A. Inness at the meeting on May 21st, he exhibited frosted specimens of Ivy, Plum, Yew, and Male Fern, all badly affected.

## NOTES AND RECORDS.

### Inland Occurrence of Sea-birds.

While I was fishing in Hulne Park on June 13th a Fulmar flew over Filbert Haugh Bridge, going north. This is over five miles from the sea as the crow (or Fulmar !) flies. On June 17th at about 11.15 a.m. I had to slow down to avoid running over an Arctic Tern which was sitting on the Little Mill-Alnwick road, 2 1/2 miles from the sea. The bird appeared quite normal and healthy, and flew off in a north-westerly direction, being presently "mobbed" by a peewit, which presumably mistook it for a Black-headed Gull. I have never before seen an Arctic Tern more than a mere hundred yards or so from the sea.- J. M. CASTER.

### Hatch of May-fly on the Aln.

It may be of interest to record that on June 8th in Hulne Park there was a fair hatch of May-fly-genuine Green Drake, *not* Stone-fly.-J. M. CASTER.

### A Curious Food for the Clothes Moth (*Acampsia pseudospretella*).

A year or two ago I procured a large number of gelatine capsules for the purpose of storing lepidopterous eggs and similar material. In March this year I was surprised to find that these had been attacked, and completely destroyed by larvae of the common Clothes Moth.-J. W. HESLOP HARRISON.

### Scarcity of Butterflies in the Team Valley this Season.

In recent years I have drawn attention to the increase in the numbers of butterflies in this district. This year commenced badly enough for only one Tortoiseshell was seen in Spring (March 17th). Very few *Pieris napi* flew in May, whilst the first brood of the Small Copper (*Chr. phlaeas*) began to attract attention in the last week in June. Similarly the Common Blues (*Lycaena icarus*) of the first brood, both inland and on the coast, are just now, July 12th, flying freely. The Small Heath and Meadow Brown continue to extend their ranges and are now well established everywhere here.-J. W. H. H.

### **The Distribution of the Small Pearl Bordered Fritillary. (*Brenthis selene*.)**

When a census was taken of our Northumberland and Durham butterflies it was found that only Mr. J. R. Johnson and myself had taken this interesting little butterfly recently. This season, to check off localities in which I had not seen it for years, although Mr. Johnson had done so, I visited them. Late in June, throughout the old Shotley Bridge-Ebchester habitats, it was common enough, and I noted it also at Whittonstall.- J. W. H. H.

### **Butterflies and Flowers.**

In mid-June, when *Pieris napi* flew freely with the Orange Tip near Hurworth, both were noted probing flowers of the Germander Speedwell (*Veronica chamaedrys*), a plant I had not seen visited before. In the same way, at Lanchester and Ebchester, I noted the two Pearl Bordered Fritillaries (*Brenthis selene* et *B. neuphrosyne*) visiting Lousewort and Bugle.-J. W. H. H.

### **Bees and Flowers.**

That bees are not attracted to flowers by scent alone, has been demonstrated in two ways according to observations in my notebooks. Once in Northumberland Street, some time ago, *Bombus terrestris* was seen making frantic endeavours to get at the artificial flowers in a shop window. Lately, one was noticed making similar attempts to reach real flowers through the glass windows of a closed car.-J. W. H. H.

### **A late Clouded Drab (*Taeniacampa incerta*).**

On June 22nd, a belated female of this early spring species was taken at rest on a fence near Birtley.-J. W. H. H.

### **A White Common Thistle.**

It is, of course, a very common thing to see white flowers of the marsh thistle. This year, amongst a colony of the common thistle (*Cirsium arvense*) growing on the Target Heap here, quite a number have produced white flowers.-J. W. H. H.

### **Double Mayweed (*Matricaria inodora*).**

Practically growing with the last named plants was found a magnificent specimen of the present species with perfectly double flowers. Its numerous neighbours were quite ordinary.-J. W. H. H.

### **Flowering of Bullace near Birtley.**

The Bullace commenced to flower on March 18th with us, followed by the blackthorn three weeks later.-J. W. H. H.

### **Abundance of the Puss Moth (*Cerura vinula*) this year.**

During May more specimens of this insect have been brought to me casually than I have seen during the whole of my collecting experiences Birtley. Enormous numbers of tiny larvae also appeared on the willows my garden, but were all killed by the May frosts.-J. W. H. H.

### **Scarcity of Humble Bees.**

When the season started queens of the whole of our local species abounded at sawlow. However, in their case, May frosts also have proved fatal, so

that now, for the past week, I have only seen two examples, both workers, one of *Bombus hortorum* and the other of *B. pratorum*.-J. W. H. H.

**Immigrant Red Admiral (*Pyrameis atalanta*).**

Only one example of this butterfly has come under my notice this year and that was near Budle Bay.-GEO. HESLOP HARRISON.

**On the Behaviour of a Curlew.**

On May 27th, while motoring with a friend over the moors near Hallington Reservoirs, we were attracted by the strange behaviour of a Curlew. It was standing in close proximity to a sitting sheep and its attendant lamb and flourishing its long bill in front of the lamb's nose, every now and then lunging out and digging the lamb in the ribs. The lamb, disliking the treatment, shrank away and dodged round its mother; but the Curlew followed it with vigour and more than once actually climbed on to the back of the sheep in its endeavour to reach the lamb on the other side. The sheep imperturbably chewed its cud and never stirred, though the Curlew at times struck a blow at it also and made its wool fly. Two or three times during the encounter the Curlew drew off and stalked majestically away; but only for a few yards, when it would glance back, and, seeing the lamb still there, wheel suddenly round and return to the charge. Being in the car we were able to drive very near to the spot without disturbing the group and we enjoyed every incident of the fray at close quarters. Unfortunately we had not time to stay to see the end of the affair. As soon as we moved the Curlew flew off and the sheep and lamb bounded away. We walked up to the spot fully expecting to find that the sheep had been sitting on or close beside the Curlew's nest. Upon searching however we discovered the nest, with four eggs, at least a dozen yards away.-GEORGE W. TEMPERLEY.

***Orchis ustulata* Linn.-The Burnt-tip Orchis-in Durham and Northumberland.**

So far as I have been able to ascertain, with the single exception referred to below, no present day botanist has had the pleasure of seeing this interesting little Orchis in either of our two counties. That it was originally a native of both counties is well established from old records and specimens. Can it be that it has become extinct, or has it merely been over-looked? From what we know of the changes which have taken place in many of its old stations, we fear the worst. The following notes will serve to give some idea of its distribution in the past.

COUNTY DURHAM. V.C. 66.

*Records-*

"On the warren at Hartlepool. 1797." An MS. note in an old copy of Withering's "British Plants" once belonging to Miss Wharton.

"On Fulwell and Boldon Hills, on the sea-coast near Marsden Cottage and Ryhope, and in pastures near the new bridge at Lambton Gate. At Baydales-Mr. Backhouse. On the east side of Cleadon Hills- Mr. R. Waugh and Mr. J. Thornhill."

-N. J. WINCH in "Flora of N. & D." (1832.)



" About Dinsdale and Middleton-one-Row."

-N. J. WINCH in " Addenda to Flora of N. & D." (1836.)

" In Durham it is scattered over the Magnesian Limestone from Marsden to Hartlepool" and Darlington, and occurs also in meadows near the Tees at Dinsdale and Middleton-one-row."

-BAKER & TATE in "New Flora of N. & D."

"A single plant found in Urpeth Bottoms in 1903-a new locality."

-Dr. J. W. HESLOP HARRISON:- in *The Vasculum*, III., 86.

*Specimens-*

"Cleadow Hills. "-no date-in the Winch Herbarium.

"near Marsden 1836." in Sir Waiter C. Trevelyan's Herbarium.

"Near Marsden 1850." in Thomas Bell's Herbarium.

*Notes-*

Prof. J. W. Heslop Harrison informs me that except for the single plant at Urpeth Bottoms he has not seen *Orchis ustulata* in the County.

Mr. J. B. Nicholson of Darlington writes-" I have never met *Orchis ustulata* in the north and think it very improbable that it occurs to-day in this neighbourhood. The Baydales locality I am quite familiar with, and you may take it that *O. ustulata* is certainly not to be found there now. Baker and Tate's expression-" in meadows near the Tees at Dinsdale and Middleton-one-row " has always puzzled me, as I know of no likely place thereabouts for a chalk-loving plant. The rock is Red Sandstone, I believe, but covered by a heavy clay soil. I have certainly come across no signs of a calcicolous flora there."

SOUTH NORTHUMBERLAND. V.C. 67.

*Records-*

" On the banks between Tynemouth and Cullercoats."

-N. J. WINCH in " Addenda to Flora of N. & D." (1836.)

"In Northumberland this has been gathered only on the coast links between Cullercoats and Tynemouth."

-BAKER & TATE in "New Flora of N. & D."

*Specimens-*

There is no specimen from Northumberland in the Winch Herbarium, nor in any of the other local herbaria now in the Hancock Museum.

*Note-*

Those who know the "coast links between Cullercoats and Tynemouth " are not likely to expect to find *Orchis ustulata* there now. -GEORGE W. TEMPERLEY

**Longevity of Frogs.**

Eight years ago-September, 1927-a small pond, which had existed in my garden here for about thirty years, was demolished, the cement bottom being removed and the space completely filled up with soil to make a flower bed. The pond had for years been the haunt of numerous frogs, and every spring had been black with tadpoles. Each spring for the last eight years a gradually diminishing number of frogs have revisited the site of the pond

and deposited their spawn on the flower-bed, though, of course, the spawn could not develop on the dry soil. This year only one pair of frogs has appeared and one deposit of spawn has been made.

The neighbouring gardens have no ponds, so it seems that the frogs in my garden this year must be at least eight years old, and must have come back to their old haunt annually in a vain effort to reproduce their kind.

I should be interested to know whether other readers of *The Vasculum* have had a similar experience elsewhere.-MARGARET A. TEMPERLEY.

#### **The Lesser Meadow-Rue.**

In connection with the request for local material of Meadow Rue in our last number it may be of interest to note the following paper by Dr. Butcher; "*Thalictrum minus* Linnaeus *sensu latissimo* in Britain," *Journal of Botany*, 72, June, 1934, pp. 153-165.

In this the author describes more fully the eight forms figured in the *Further Illustrations of British Plants*. He considers the characters of the ripe fruit and of the stem-base to be the most important for diagnosis, so that these parts should be carefully included in specimens sent to him for verification. Maps of distribution and lists of localities are given and the following are noted as of local interest:-

*T. arenarium* Butcher. Hartlepool (66), Alnmouth (68).

*T. montanum* Wallroth. Kylee Craggs (68).

*T. capillare* Reichenbach. Burnmouth Hill, Berwickshire.

*T. umbrosum* Butcher. Winch Bridge (66).

-K. B. BLACKBURN.

#### **The White Water-lily and Greater Spearwort at Walltown Craggs.**

In the first volume of the *Transactions* of the Tyneside Naturalists' Field Club there is an account of a Field Meeting of the Club held on July 12<sup>th</sup>, 1847 "in a range of country extending from Haydon Bridge to Walltown and Haltwhistle." In describing the plants found on or near Walltown Craggs the recorder writes "- - - in a pond to the south east of it (the Craggs) *Nymphaea alba* and *Nuphar lutea* were flowering in great profusion and *Ranunculus Lingua* grew at a short distance from its edge."

These records are confirmed in Baker & Tate's "Flora" thus:- *Nymphaea alba* L. "Truly wild .... in a pond south-east of Walltown Craggs elevation about 700 ft."

*Ranunculus Lingua* L. "in a pond on the moor top near Walltown Craggs where it grows amongst Typha at an elevation of 250 yards (Rev. Dr. Cundal)." The Dr. Cundal referred to was a member of the Field Club.

I have searched the moor top near Walltown Craggs, but have failed to find a pond, or other watery site, in the least suitable for anyone of the four species mentioned above; though there is a depression which may at one time have contained water. We must therefore conclude that these plants are now extinct at this station, which was a particularly interesting one owing to the altitude, 700-750 ft., at which these usually lowland species were reported to have been found.

In an account of a Field Meeting of the Wallis Club held at Hexham and Fallowfield on June 14th, 1924, which appeared in *The Vasculum*,

Vol. x., p. 125, the following sentence occurs:-" amongst the plants a hundred year old record of the large Spearwort for a pond near Walltown Craggs' was verified." There seems to have been some error here. The crags on Fallowfield Fell, though rising near to the village of Wall, are not to be confused with Walltown Craggs" which lie to the N.W. of Haltwhistle at least sixteen miles away. The early record leaves no doubt whatever that the Field Club found these plants near the true "Walltown Craggs" in 1847.

*Ranunculus Lingua* is evidently a dwindling species in Northumberland. It is no longer to be found in its old stations at Prestwick Carr, Widehaugh and Dunstanburgh and in County Durham it has been eradicated at Hell Kettles.

GEORGE W. TEMPERLEY.

N. N. U. Recorder of Flowering Plants

[The pond was already drained when I went to Haltwhistle in 1896 the broad ditch still contained some Typha and at least one *Ranunculus*.-J. E. H.]

#### **A Note on some North Northumberland Spiders.**

The beating of whins, usually the haunt of the common *Epeira diademata*, did not produce either at Goswick or Kirknewton a single specimen of that species. Its place was taken by *E. cornuta*, even to the distance of twenty paces from the nearest water, though its habit is to suspend its web either wholly or partly over water. At both places the predominant occupant of the whins was *Zygiella atrica*, and the (generally!) ubiquitous *Meta segmentata* did not appear at all.- J. E. HULL.

### **RECORDS.**

#### **BIRDS.**

**Parus atricapillus kleinschmidtii** Hellm. The British Willow Tit.

V.C. 66,67

On April 6th and again on May 1st I identified a pair of Willow Tits in Gosforth Park. I watched them with glasses at close quarters in a good light and heard both their song and their alarm note.

In Ravensworth Park, in the same tree-slump in which the Willow Tits bred last year (see *The Vasculum*, Vol. XX., p. 134) excavations were commenced this year in early April. By April 15th a hole had been driven about two inches horizontally and sinking had just begun. After this date no further excavating was done. Contrary to last year's method, the crumbs of rotten wood had dropped just outside the hole and the ground was littered with them. At no time were the birds seen at work and I have not been able to discover whether they bred elsewhere.-GEORGE W. TEMPERLEY.

**Coracias garrulus garrulus** L. The Roller.

V.C. 67

On June 3<sup>rd</sup> a female Roller was picked up on Snabdough, near Tarsset, in an exhausted condition; it died shortly afterwards. It had been observed a few days previously on Bower Farm. It is now in the Hancock Museum.

This rare casual visitant has been previously recorded at least thirteen times in the county of Northumberland. It would seem that its visits are becoming less frequent, or that it has more successfully escaped observation, for the last recorded occurrence was in 1901.-GEORGE W. TEMPERLEY.

**Sylvia borin.** Garden Warbler.

67

Several pairs resident in Heaton Park, Newcastle-upon-Tyne, this summer.

**Dryobates major anglicus.** Great Spotted Woodpecker.

67

Nested again in Gosforth Park, occupying the same nesting hole in an elm as it did in 1932. Both birds were observed at the nesting hole on May 19th, when a large number of fresh wood chips were found on the ground in the vicinity. Young birds were heard "cheeping " in the nesting hole on May 31st.-C. J. GENT.

**INSECTA.**

## LEPIDOPTERA. Butterflies and Moths.

**Erynnis tages** L. Dingy Skipper.

66,67

Not uncommon near Hurworth, Greatham, Lanchester, Hexham etc.- J. W. HESLOP HARRISON.

**Euchloe cardamines.** Orange Tip.

66

Flying near Hurworth in mid-June.

**Panolis piniperda** Panz. Pine Beauty.

67

Beaten as larval; Prestwick Car, Dipton Woods, and Hexham.

**Phytometra aenea** Hb. Small Purple Barred.

66,67

Common at Hurworth, Lanchester and Shotley Bridge.

**Euclidia glyphica** L. Burnet Noctua.

66

In a field near Ebchester.

**Strenia clathrata** L. Latticed Heath.

66,67

Common enough near Hexham, Coatham Mundeville, Hurworth, Lanchester, Blackhalls.

**Anticlea badiata** Hb. Shoulder Stripe.

66

For the first time near Birtley; taken as larvae.

**Eupithecia minutata** Gn. Heath Pug.

66

On Waldrige Fell.

**Eupithecia subfulvata** Hw. Tawny Speck.

66

Late in June after a south-west wind I found numerous examples of this species on a fence along the "Loan" near Birtley. Many were quite typical but some were absolutely black with a deeper discoidal point standing out. As the late Mr. J. R. Johnson was

so keenly interested in this species and would have rejoiced in its new guise I now name it var. *johnsoni* as a tribute to our very long friendship and his great work with the " Pugs."

**Thera firmata** Hb. Pine Carpet. 66, 67

Everywhere in pinewoods and quite common. Hurworth, Prestwick Carr, Shull, Lanchester, Dipton Woods, Hexham, etc.

**T. obeliscata** Hb. Broad Bar. 66, 67

With the preceding and even more plentiful: melanic forms abound in some stations.

**Ellopea prosapiaria** L. Barred Red. 66, 67

At every point at which the last named has been seen: Prestwick Carr, Dipton, Ebchester, Shull, Lanchester, Hurworth, Hexham, etc. Black larva, in Dipton Woods.

**Zygena filipendulae** L. Six spot Burnet. 66

On the roadside near Hurworth.

**Hepialus humuli** L. Ghost Moth. 66

Every collector knows of the magnificent Shetland form of this insect in which the male resembles the female to some extent. Amongst the specimens bred from Birtley larvae was an example the reverse of *thulensis* Newman (*hethlandica* Stand.). This was a female, nearly white, with the usual markings practically obsolete, of the form *albida*.

**Chesias spartiata** F. The Streak. 66

Larvae some bright orange yellow, not green, swarming on broom near Lanchester.

**Odezia atrata** L. Chimney Sweep. 67

In College Road, Newcastle !-J. W. H. H.

**Chaerocampa elpenor**. Elephant Hawk-moth. 66

Taken in greenhouse, Geneva Road West, Darlington. -C.W. MURRAY.

#### HEMIPTERA-HOMOPTERA.

*PSYLLIDAE*. Jumping Plant-lice.

**Psylla bagnalli** Harr , 68

Sparingly from Sea Club-rush and small rushes growing near Budle Bay.

**Psylla hippophaes** Först. 68

Not abundant on [-*I. rhamnoides* at Budle Bay.

**Psylla brunneipennis** Edw. 66, 67, 68

Common on *Salix fragilis* near Budle Bay, Gosforth Park and Vigo.

- Psylla hartigii** Flor. 66  
Sparingly at Waldrige Fell on birch. More common at Beamish, but rare at Gosforth Park.
- Psylla crataegi** Schr. 66  
The single female which I refer to this species was beaten from hawthorn at Beamish.  
COCCIDAE Scale Insects.
- Lecanium persicae** Geoff. 68  
Very abundant in all its stages on Cotoneaster growing in Belford station.
- Lecanopsis formicarum** New. 67  
Two immature sages were presented to me by Dr. Blackburn. They were collected from *Dactylis glomerata* near Blanchland. At this stage, at one time the insect was recognised as a different species.-*L. brevicornis* New.
- Dactylopius walkeri** New. 66, 67, 68  
Very abundant everywhere on grasses of many different species.
- Pseudococcus dactylis** Green. 66  
At Lambton on *Dactylis glomerata*.
- Phenacoccus (Pseudococcus) aceria** Sign. 66  
Very sparingly on hawthorn at Chester-le-Street, but very abundant everywhere on Gorse.
- Orthezia cataphracta** Shaw. 66  
Common at the roots and lower portions of yarrow everywhere.
- ALEYRODIDAE. Snowy Flies.
- Aleyrodes quereus**. 66  
Common on oak at Lambton.
- ODONATA. Dragon-flies.
- Agrion pulchellum** Linden. 67  
Flying in some numbers with its more common allies *E. cyathigerum* Charp. A. *puella* Linn. and *I. elegans* Linden at Gosforth Park.
- COLEOPTERA. Beetles.
- Saperda scalaris** Linn. 67  
Beaten from *Salix* species at Gosforth Park. A second example was observed in flight.
- Strangalia maculat** Poda. 66  
Several specimens of this rather uncommon Longicorn were taken or seen on Waldrige Fell.-GEORGE HESLOP HARRISON.

## ARACHNIDA.

## ARANEAE. Spiders.

**Epeira cornuta** Clerck. 68

Both sexes on whins, Goswick and Kirknewton, the females spun up with eggs.-J. E. HULL.

## ACARI.

## ORIBATIDAE. Beetle Mites.

**Scutovertex lineatus** Thorell. 68

Howick Bay, on Confervae under the drip of the cliffs. Among them was a stray *Damaeus clavipes* Herm.-J. E. H.

## ERIOPHYIDIE. Gall Mites.

**Eriophyes xylostei** Can. 66

On honeysuckle, near Hurworth.

**Eriophyes tuberculatus** Nal. 66

On tansy, Durham City.

**Eriophyes goniothorax** Nal. 66,67

On hawthorn, Lanchester, Hurworth and Wylam.

## FLOWERING PLANTS.

**Sisymbrium Thalianum** Gay. 67

On wall tops between Harbottle and Alwinton; plentiful.

**Cerastium semidecandrum** L. 67

On wall tops between Harbottle and Alwinton. This is an extension of its recorded range, as Baker and Tate reported it as "ascending Coquetdale to Holystone."

\***Crepis biennis** L. 67

On the road-side near Mitford; about a dozen plants. Discovered by Miss M. E. Urton, June, 1935.

This constitutes a new country record. As pointed out by Baker and Tate-"New Flora of N. & D." page 190-the plants recorded by N. J. Winch under this name were, for the most part, *Crepis virens*-those from the ballast hills being *Crepis taraxacifolia*.

**Scutellaria minor** Huds. Lesser Skullcap. 66

Winch's "Flora of N. & D." (1832) gave only one station for the plant-"on moors south of Wolsingham, D. plentiful-Mr. Backhouse." This was repeated by Baker and Tate "New Flora of N. & D." (1867) thus-"on the moor above the hall at Shull near Wolsingham (W. Backhouse)" no additional stations being recorded. When the members of the N.N.U. visited Drdyerdale on July 6 1935, they found the plant growing on the moor exactly as recorded more than a century ago. It has now been found in two or three places in the two counties, but its distribution appears to be very local.

<b>Carex helodes</b> Link (= <i>laevigata</i> Smith).	66
On the moors above Dryderdale.-GEORGE W. TEMPERLEY.	
<b>Cirsium heterophyllum</b> L. Melancholy Thistle.	66
On the road side between Lanchester and Wolsingham.-J.W.H.H.	
<b>Rosa pseudomollis</b> Ley. Downy Rose	66
Growing with an enormous colony of <i>R. mollis</i> on an old pit heap near Birtley.	
<b>Senecio crucifolius</b> L. Ragwort.	66
Abundant on the road side near Coatham Mundeville.	
<b>Hordeum marinum</b> L. Sea Barley.	66
A very small patch at the south end of the Blackhall Rocks.- J. W.H. H.	
<b>Chara vulgaris</b> L.	66
In a small pond a few years old in sand pit, Haughton Rd., Darlington (about a mile from G.P.O.), May 27th, 1935.-JOHN E. NOWERS.	
<b>Genista tinctoria</b> . Dyers Greenweed.	67
A small colony in a lane at South Gosforth.	
<b>Trifolium medium</b> . Zig-zag Clover.	67
Occurs in the same lane as the preceding.-C. J. GENT.	
<b>Corydalis claviculata</b> D.C. Climbing Fumitory.	68
Sprawling over the bracken in the glen at the foot of the Routin Linn.-J. E. HULL.	
<b>Cerastium erectum</b> C. & G. Upright Moenchia.	68
Goswick. Plentiful on a dry bank at the foot of the dunes.	
<b>Geranium sanguineum</b> L. Bloody Cranesbill.	68
Howick Bay; on the cliff and below in plenty.	
<b>Papaver somniferum</b> L. Garden Poppy.	68
Scattered along the bank of the College Burn between Kirknewton bridge and the ford above it.	
<b>Epilobium tetragonum</b> L. Square-stalked Willow-herb.	68
On the College Burn. The typical form, not <i>obscurum</i> .	
<b>Chenopodium Bonus-Henricus</b> L. Good King Henry.	68
By the College along the cart track which crosses the stream above Kirknewton bridge.-J. E. H.	



# REVIEW.

**"The London Naturalist" for the year 1934.** This, which is the journal of the London N.H.S., was published in June of this year, and is practically a summary of the field-work done by the members during 1934. Archaeological and Ramblers' sections are included with the rest and reports of their field meetings duly appear.

Bound with the present issue are pp. 83-98 of the Botanical Records of the London area, and other catalogues comprise the "Brambles of Kent and Surrey," a list of noteworthy birds observed in the London area in 1934, and another of birds seen on the sewage farm at Edmonton. The ornithologists give special attention to the Hawfinch, the Lesser Redpoll, the Tree Sparrow, the Sedge Warbler and the Little Grebe and the records are given in detail. Mr. H. Q. Burkill is well to the fore with (among other things) records of Plant-galls, and a very interesting catalogue of plants found in a dried-up part of the course of the River Mole.

More general papers include the President's address on alpine plants at home on the Alps, and a summary of the records of the more notable British Butterflies in 1934. Three plates are included-excellent reproductions of photographs of the Stone Curlew (Norfolk), *Silene acaulis* (on the Alps), and *Lastrea montana* (in Richmond Park).

Botanists should note in particular the Rubi paper mentioned above includes some important corrections of Rogers' Handbook, addition characters of certain forms, one new species, and two new varieties. author is Mr. W. Watson.

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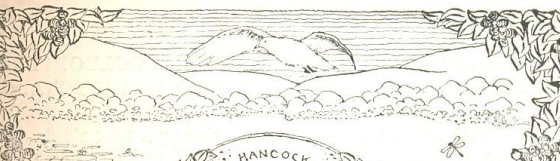
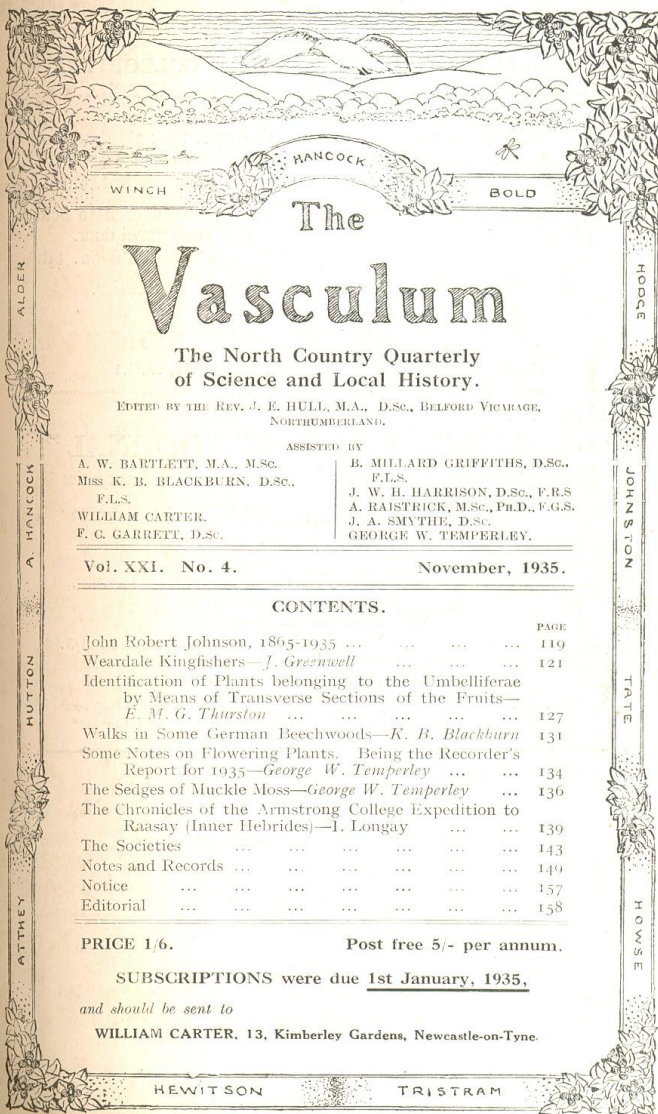
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## THE VASCULUM

Vol. XXI. No. 4

November, 1935.

### JOHN ROBERT JOHNSON, 1865-1935.

All naturalists, no matter what their interests, have learnt with the deepest regrets of the death of Mr. J. R. Johnson on June 17th, 1935.

Born on February 3rd, 1865, he received his early education at the Wesleyan School, Gateshead, leaving it at an early age to be apprenticed as a patternmaker with Hawkes, Crawshaw's, the then well-known engineering firm. Unlike many nowadays, he felt the urge to get ahead, and realised that the only way to do so was to attend evening classes in Geometry, Machine Construction and Drawing, and allied subjects. What a sacrifice this meant can only be recognised fully by those acquainted with the long hours his daily work implied. At such studies he displayed such aptitude that, before he was out of his time, he was asked to become an assistant teacher in Machine Construction for the very classes he had just left.

Shortly after this he went as a patternmaker to Palmer's Shipbuilding yard, only to be thrown out of work when the big strike took place. Determined never again to be caught in a strike like that, he looked elsewhere: in consequence, he applied for and secured the post of Manual Instructor at Gateshead Secondary School. This brought with it other duties in the form of evening classes in Machine Construction and Drawing, Geometry, Metal Work and so on, not only in Gateshead but at widely separated points in Co. Durham.

He quickly gained fame as a thoroughly successful and competent teacher with his heart in his work and proud of it. This

enthusiasm he had the knack of communicating to his students, and wherever one goes his praises are sung by those he benefited and set along the path of life.

Retiring a few years ago from all teaching work except certain evening classes which he was specially invited to retain, he unfortunately showed signs that the heart trouble which had haunted his later teaching years was steadily getting worse. Thus, in the spring of 1934, we were all distressed to learn that he was so ill that little hopes were held as to his recovery. To our great delight, with the return of summer warmth, he was able to come amongst us with every sign of renewed vigour. Unfortunately, this proved just a flash in the pan, for during the past winter he was compelled to take to his bed until his death in June.

Let us now turn to his work as an entomologist. It can safely be said that he was one of the best field entomologists the north, and even the country, has produced. He had no patience with the collector whose sole aim it was to heap together a mass of dead insects on pins. Real entomology to J. R. Johnson meant the study of something alive, and not only alive in cages, but naturally outside. Set him a problem in an obscure life history, and the well-known smile appeared. Soon he was at work, and a solution was obtained. I remember well being with him at the Blackhall Rocks and encountering the late Mr. J. E. Gardner who, very proud of having discovered the life history of *Miana expolita*, challenged us both to find the larva. Within three minutes both produced the desired insect! My own success I assign to an adoption of Johnson's methods.

Such being his predilections, one can easily understand the challenge the presence of the three Fritillaries *Argynnis aglaia*, *Brenthis euphrosyne* and *B. selene* gave him. He must find the larvae of all. *Brenthis euphrosyne* larvae he found first, but the others we took simultaneously. From studying these Fritillaries: he passed to others, the High Brown, the Glanville, etc., until he struck the notion of making a complete set of lantern slides illustrative of the life histories of the British Butterflies. Every one knows how successful he was in this, and everyone has shared

his pleasure when he showed his slides and described them to delighted audiences at the Hancock Museum and Wallis Club meetings.

During the past ten years, parallel to this, a new interest seized him, and that was the study of the life histories of our pugs-- the Geometrid genus *Eupithecia*. The pages of *The Vasculum* speak of the success he had with his difficult undertaking.

Striking as were his qualities as a naturalist, those as a friend were just as real. I met him first 35 years ago at the Gateshead Teachers' Natural History Society, of which he was one of the founders. Since then I have been accustomed to have him come to my house to confide his joys and sorrows to me, and for the same period I have enjoyed a similar privilege. Never during the whole of that time have I known him lose that genial placidity we loved so well: in trouble and in joy, he has always been the same kindly friend. Others, too, have felt his influence, for he was generous, patient and helpful to novice and specialist alike. In our local natural history activities no one will be more greatly missed. His friends will never forget him for he was a man-and a gentleman.

Personally I always called him the "Guvnor," and I dread working the old beats without the "Guvnors" welcoming smile when I brought along some newly-found treasure for exhibition and discussion.

## **WEARDALE KINGFISHERS.**

J. GREENWELL.

From various notes in *The Vasculum*, and from recent items in local papers, it would appear that the kingfisher is becoming more widely diffused, or attracting more attention. Its appearance seems to be of sufficient interest to record as more or less of an event by naturalists and the casual observer. In the Bishop Auckland district we appear to be favoured as the bird is fairly common, and can be found daily and surely in the spring, summer and autumn. During the last 30 years I have seen the nest in

probably six to ten different localities on the Wear; also in several sites on the Bedburn and its tributary the Harthope, the Rookhope stream, and the Bollihope burn. My special interest in this bird dates from before the war, when in my spare time at nights I used to frequent a wood on the Wear bank opposite Escombe in quest of lepidoptera, at the same time keeping an eye on the birds, and other moving things of nature.

There was a quiet backwater of the Wear, a sort of natural mill-race, where a runner from the Wear flowed close to the wood edge, isolating an island of upwards of a mile long, and a few hundred yards wide. Near the inlet of this stream nested the kingfishers, then much less common than now, and one night I had the privilege of seeing four fledgelings on a dead branch being fed by the parent birds, and I cannot conceive a more beautiful and interesting picture. Since then the Wear has slightly changed its course, and does not regularly flow down this by-pass except in flood, and the water there is stagnant and in pools; yet the kingfisher still haunts this island, although the conditions are different and its original nesting site is not used, being now unsuitable.

The Wear about this point (near the slag tips of Witton Park) makes a horse-shoe bend, travelling past Escombe, Bishop Auckland, and round to Newfield, probably a 7 to 10 mile journey, the base of the horse-shoe taking a line over the top of Pixley Hill, descending in the direction of Hunwick Station, and so on to the Wear again. Standing on the footpath on Pixley Hill bank one day, I heard the well-known whistle of the kingfisher in the distance, and again much nearer; then to my astonishment the bird flew past me, continuing over the hill top, repeating the call note as he followed the base line indicated above. I have never before or since seen the kingfisher so far from water, and this short cut was fully two miles long. It avoids the populous water-side footpaths of Escombe and Bishop Auckland districts, and possibly the pollution which was then prevalent in the Wear, particularly in those localities. There was no hesitation in its flight, the usual rapid direct low progress with the accompanying call, and it seemed quite familiar with the district, but it was



startlingly out of place for a bird you associate entirely with the water and gave me additional interest in its intelligence and versatility.

The Bishop Auckland district seems to be a favourite locality for these birds, as there are several pairs within a few miles of the town. In the town itself on the Batts (a rather low class suburb on the Wear), it can be seen almost daily, not much concerned with the varied collection of hawkers' nags, dogs of all breeds, poultry, pigeons, cats, loafers, and children by the scores, a semi-gipsy establishment in striking contrast with the super- respectability of the Bishop's Castle towering above it. The Gaunless here joins the Wear, and the kingfisher tries to nest in this district annually, but its efforts are unsuccessful owing to the endless procession of roving lads, fishers, etc., on both banks of the river. I understand, however, that this year it has successfully nested in the Bishop's Park.

Further down, the river runs in a more peaceful country, as far as Newfield, and on this stretch also a pair if not more nest yearly. Last year having satisfied ourselves (my wife and I), that the birds were still breeding in this area, we systematically worked up from both ends of this stretch, narrowing the limit of the suitable breeding sites, and this year we discovered the nest on our second visit. The kingfisher, I have noticed, has a very disagreeable habit, when you are near the nest, of slipping into a tree or bush where he can keep an eye on you, and staying there as long as you remain. He plays the game of patience admirably, for beyond an occasional single cheep (maybe in communication with his mate), he outlasts your patience and time, and unless you come upon him unawares, or do not disturb his caution, he can refrain from visitingg the nest for hours together.

It had occurred to me that the kingfishers in this particular locality with their daily, almost hourly contact with human beings, might not be so cautious and timid as their brethren in less populous places, and this proved to be the case, as unless we happened to arrive at the moment when the birds were actually entering or leaving the nest, or made some incautious sound or movement from our hide, when we might resign ourselves to an

hour or two's unobserved scrutiny, otherwise the birds took little notice of us, possibly because the hide was an ideal place, under three trees, well in the shade, with a good view of the hole, and screened by dwarf willow, willow, and rank waterside vegetation. With the glasses a close-up view could be obtained, there being only the breadth of the confined river between us and the nest. We located the nest in the beginning of July, and my wife and I used to hurry down about two or three times a week after shop closing time, arriving about 7.30 p.m. There were three holes in the bank parallel to each other, about two feet apart, and the first night the birds visited the two left-hand holes, but later the middle hole was alone used. For the first week the birds' visits to the hole were infrequent (although in July we expected them to be feeding young), only at intervals of one and a half or two hours, when one of the birds would perch on a pile in the water, and give a double whistle, at which the sitting bird would fly out, and the other take its place. Always when passing the nest, even if not calling there, the bird uttered its whistle, possibly as an encouragement to its sitting mate, or to show that it was on the alert.

This part of the river has been artificially banked up, piles driven in, and the sides boarded, but there are now many gaps in this structure, one of which the nest occupies; indeed little remains of the woodwork except a few piles which stand out of the water to varying heights from two or three inches to about four feet. The first and lowest of these piles was opposite the nest, and during August the bird always came downstream, alighted on the third pile, and after looking earnestly and anxiously at the nesting hole, hopped to the second pile, and again with uplifted beak carefully examined the hole, finally hopping to the first and opposite pile, from thence flying into the nest. This flying in was interesting, in that, although the hole looked no larger than would just accommodate the birds, they flew right up and into the darkness, without hesitation or slackening of speed. They seemed to fly into and along the tunnel without touching the sides, nor was there any momentum as when the swift dives into crack or hole in a roof for the flight from the pile was short

and almost vertical. In this month the birds invariably came from upstream to the piles, and the relieved bird flew downstream to the willows by the water's edge, usually in a minute or two flying past the nest again upstream, but hugging the opposite bank away from the nest.

Perhaps it was one of the most brilliant nature pictures you can find in this country, the gorgeous bird with its blue and red sheens reflected also in the water, the sun-bathed river, the grey shining sandy bankside as a background, the green shades and the flowers of the riverside as a setting, and the blue sky over-head, with the peace and quietude of a summer's evening, and the soothing ripples of the water. When the young were big enough to be left in the nest, the piping whistle of approach and the double call before entering the nest were discontinued and the birds silently and quietly appeared on the piles, and after steadfastly looking at the hole flew up and in, but in passing the site they still indulged in the usual call note, but again this might be other kingfishers. The small minnows and such-like taken at this stage were held longways in the beak, with the back facing right, and the silvery belly showing on the left; we never saw these two particular birds carrying fish crossways, although elsewhere I have seen it done.

The ordinary call when flying up or down the river was a short shrieking whistle, exactly similar to the sound given by a rusty gate when opened quickly. The next popular call was the double whistle used to communicate with the mate on the nest, and also used occasionally at other times. Another variety was more of an explosive song, reminding one of the bubbling squeals and wheezy gurgling whistles of the displaying starling, but louder and with some hysterical laughter in it. A much gentler call is also used when feeding the young after leaving the nest, rather a longer drawn and softer notes than the ordinary travelling whistle. The young have a fluty pleasant soft call, more than an octave lower than the parents, and much more musical to our ears.

The birds of the rivers have very similar calls, and it is always entertaining to identify surely the birds by their call. The sandpiper and dipper test your accuracy often, and even other birds,

as different as the robin and swift, occasionally puzzle you with their similarity to some of the notes of the kingfisher, when in the distance. Our kingfishers (if it were they and not some other pair!) only once fished near the nest. I saw a bird alight on a half-submerged dead tree branch and dive into the water vigorously, but possibly owing to the rather dirty state of the water at the time, the dive appeared unsuccessful; on emerging it flew to a pile top a few yards farther down the stream. In about five minutes it again dived with a splash, with no better success. On recovering it hovered over the water somewhat after the fashion of the quivering kestrel, but with rapidly whirling wings, and it was now so close to me, and so almost directly overhead, that it looked like a red wheel of feathers whirling; then probably catching sight of its too near admirer, it flew off. When perched on some bare branch or post on the water, with the blue back towards you, the kingfisher is quite noticeable, but more difficult to locate amongst the green bushes; when he faces you with the red showing on his breast, he harmonises so well with the usual river bank background, that he is extremely difficult to detect whether in the open or in the bushes. This particular nest was very late, probably a second event, the first having been a failure, as the young were not out of the nest till September 3rd. On that date I saw three young being fed amongst the sallows, but observation was now difficult, and although I could hear on both sides of the hide the old and young ones, only occasional glimpses of either were now possible in the thick bushy sallows overhanging the water. It was pleasing to know they had reared their brood, as in addition to the usual intruders, the many visitors of the blackberry season would soon appear, and the birds would have little chance of being unobserved and undisturbed.

A good deal of the pleasure in the observation of this pair of kingfishers was to note in the intervals the other denizens of the waterside. Nearly each week also there was some change in the species of birds frequenting the vicinity. The swallow tribe gradually increased until they flocked in scores and roosted in the sallows. The moorhens were constant companions and a pair of grebes stayed an hour under observation on August 8th. A water

vole must have had a family nearby, as he also had a definite routine in his visits to his den, running over a certain mudpatch, then swimming round a hillock, then threading his way through a few reeds, and finally disappearing into a patch of scrub, but he never appeared to return this way, but skirmished about the bankside. Amongst all the attendant birds, including the lesser black-headed gulls, which almost unceasingly cruised to and fro over this stretch of water, the kingfishers took not the slightest notice and when the swallows were in a panic at the presence of a hawk, they showed no anxiety, but in all cases the most complete indifference. Nor did they show any fear or jealousy of the gulls; and when a sandmartin, in the lightness of his heart in a merry mood followed the kingfisher into the hole, and peered in, clinging to the entrance, no fierce sword-like bill hastened him off. For such a dandy, his total indifference to display, his untiring industry, his directness and purpose, his contempt of leisure and ease, and his general air of business first and last, make the kingfisher, I think, a most interesting study.

#### **IDENTIFICATION OF PLANTS BELONGING TO THE UMBELLIFERAE BY MEANS OF TRANSVERSE SECTIONS OF THE FRUITS.**

E. M. G. THURSTON.

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In the Umbelliferae, as in most natural orders in which the family characteristics are easy to recognise, the distinguishing features of the genera and species are difficult to make out. The only reliable method of identification is by an examination of the fruits.

This is not easy by macroscopic methods, but transverse sections of the fruits examined under the low power of the microscope show that each genus and species has very definite and easy recognisable characteristics. The dry fruits steeped over night in cold water can be cut with an ordinary hand razor.

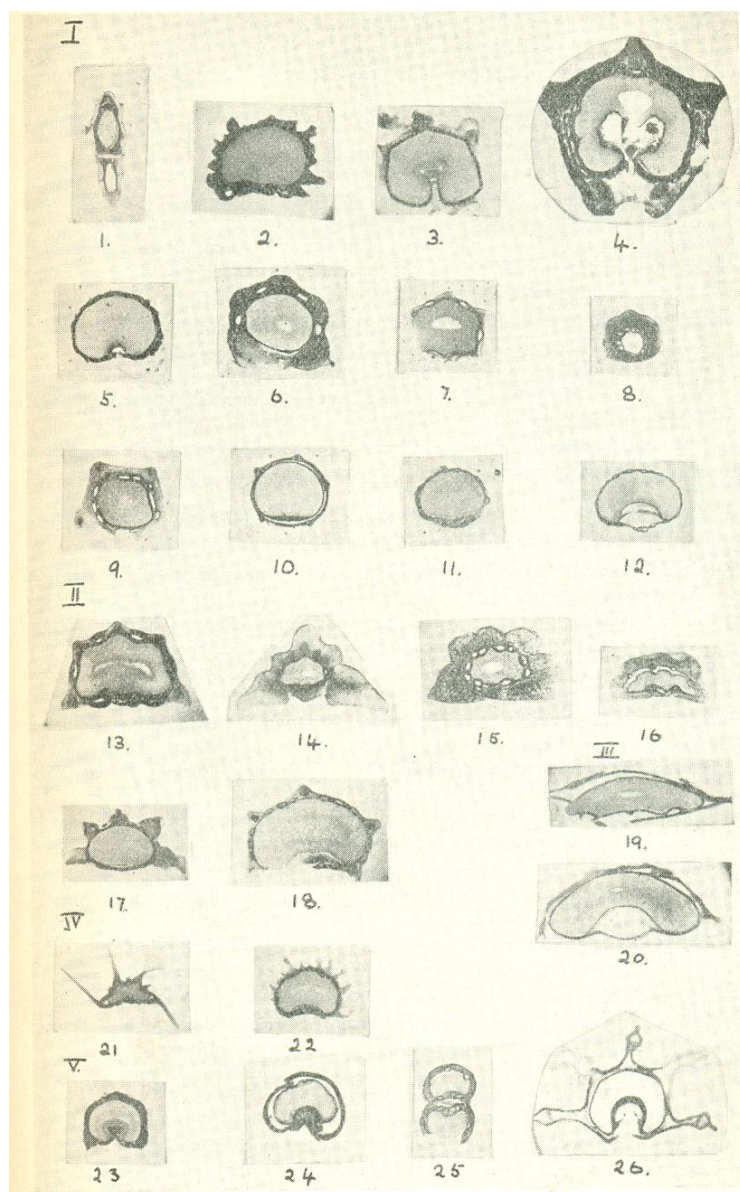
The photographs show transverse sections of the fruits of some of the common British species. Named fruits were obtained from the Royal Botanic Gardens, Kew.

The sections show that the nerves or ribs are usually five in number. The ribs differ in size. They may be broad as in *Oenanthe* spp. (Figs. 14, 15, 16) or long as in *Myrrhis odorata* (Fig. 26).

Sometimes they are so small as to be scarcely distinguishable (*Conopodium denudatum*) (Fig. 12). The part between the ribs is called the furrow, but where the ribs are small and the intervening part large it is usually known as the interstice. The size and depth of the interstice varies with the size of the ribs.

In the pericarp are longitudinal channels which appear oval in transverse section. These are vittae. They are filled with an oily or resinous substance which gives the Umbelliferae their characteristic smell. They are usually within the furrows, but in few cases, e.g., *Daucus Carota* (Fig. 21) they are underneath the ribs. They may be in groups of two or three, or they may occur singly in each interstice, or they may be absent altogether. Another feature of taxonomic value is the form of the albumen. This may entirely fill the seed, e.g., *Sium* spp. (Figs. 8, 9) or be slightly furrowed on the inner side so as to produce a kidney shaped seed, e.g., *Conopodium denudatum* (Fig. 12), or it may be deeply furrowed, e.g., *Scandix Pecten*. The following are short descriptions of the photographs. They are named according to the London Catalogue of British Plants. 11th Edition.

GROUP 1	Fruit laterally compressed i.e., the two flattened lobes which are united by the narrow edge.
FIG 1	<i>Hydrocotyle vulgaris</i> -one prominent rib on each side-no vittae.
FIG 2	<i>Sanicula europaea</i> -no perceptible ribs-no vittae-fruit covered with short prickles.
FIG 3	<i>Conium maculatum</i> -five prominent ribs often slightly waved- no vittae-albumen with a deep longitudinal furrow on the inner face. Photograph also shows the embryo.
FIG 4	<i>Smyrniololus atrum</i> -three prominent ribs-several each interstice-albumen with a longitudinal furrow on face.
FIG 5	<i>Bupleurum rotundifolium</i> -ribs scarcely albumen furrowed.
FIG 6	<i>Cicuta virosa</i> -five ribs, broad-vittae single large in each interstice.
FIG 7	<i>Carum Carvi</i> -five ribs-vittae single, large, in each interstice.



- FIG. 8. *Sium angustifolium*-five ribs scarcely prominent-several vittae in each interstice.
- FIG. 9. *Sium latifolium*-larger than former-five ribs=vittae numerous and oval shaped.
- FIG. 10. *Aegopodium Podagraria*-five slender ribs-no vittae.
- FIG. 11. *Pimpinella Saxifraga*-ribs scarcely visible-vittae two or three in each interstice and several large vittae on the inner face.
- FIG. 12. *Conopodium denudatum*-ribs scarcely perceptible-several very slender vittae in each interstice-albumen with longitudinal furrow on the inner face.
- GROUP 2. Fruit not flattened and the division between the carpels broader than those of group 1.
- FIG. 13. *Foeniculum vulgare*-five short ribs-single vittae in each interstice and also on the inner face-albumen slightly furrowed all round.
- FIG. 14. *Oenanthe fistula*-five obtusely convex ribs-vittae single, present but not prominent in each interstice – album slightly furrowed all round.
- FIG. 15. *Oenanthe crocata*-ribs broad-vittae, two in each interstice -albumen slightly furrowed all round.
- FIG. 16. *Oenanthe pimpinelloides*-ribs scarcely prominent-vittae single in each interstice.
- FIG. 17. *Aethusa Cynapium*-five thick prominent ribs and narrow furrows -vittae single showing as dark spots in the photograph.
- FIG. 18. *Meum Athamanticum*,-five prominent acute ribs-vittae two or three in each interstice.
- GROUP 3. Fruit dorsally compressed i.e., the two flattened lobes are united by the broad edge.
- FIG. 19. *Heracleum Sphondylium*-ribs, three but scarcely perceptible- vittae, one to each interstice.
- FIG. 20. *Coriandrum sativum*-ribs, three not prominent-vittae none- albumen with broad furrow on inner face.
- GROUP 4. Fruits prickly, not beaked.
- FIG. 21. *Daucus Carota*-four secondary prominent ribs and three smaller primary ones-vittae, single, beneath the ribs.
- FIG. 22. *Caucolis Anthriscus*-three or seven ribs-vittae single in interstice-albumen more or less furrowed on the inner face.
- Group 5. Fruits more or less beaked.
- FIG. 23. *Scandix Pecten*-five broad obtusa ribs-vittae none-albumen with a deep longitudinal furrow on the inner face.
- FIG. 24. *Anthriscus sylvestris*-ribs inconspicuous-vittae none-albumen with a longitudinal furrow, on the inner face.
- FIG. 25. *Chaerophyllum temulum*-ribs cannot be distinguished-vittae large and single and on inner face albumen slightly furrowed.
- FIG. 26. *Myrrhis odorata*-five very prominent ribs acute and hollow-vittae none-albumen of seed kidney shaped.



**WALKS IN SOME GERMAN BEECHWOODS.**

K. B. BLACKBURN.

Often, when taking a holiday abroad, conditions are so different from those at home that one can only take note of outstanding features. A series of walks taken this September in the hills surrounding the Weser valley, in the neighbourhood of Hameln (= Hamelin) were ideal from this point of view because there was just sufficient difference to keep up the interest, apart from the views, but not so much that the mind was confused by too much detail. The hills in question are low Oolite ridges usually reaching a height of about 1,200 ft. They may well be compared to the Cotswold hills, but are less a group of hills and more a series of small separate ranges rising from the plain. They are covered with apparently natural beech wood, sometimes mixed with oak, but there are also large areas planted with spruce. The mapped routes through the forest are clearly blazed, but, at times, so narrow that if you were not careful you strayed on to a wider track, where you might get lost, but a notice saying that you must not go was never encountered. A pleasanter country to walk in it would be hard to find; the roads to reach the hills were bordered with fruit trees, and, windfall apples are a great assistance on a hot and thirsty day. Blackberries were of most excellent size and quality, as well as quantity, and occasional afterthought raspberries and strawberries varied the dessert. If we got tired of these delights a possibility of getting coffee at the outlook tower on the hilltop was far from remote, although the walking season was clearly over, since we usually had the hills to ourselves. Occasionally one might see waggoners carting logs of unbelievable length, or a farm hand leading a pair of oxen yoked to a long low cart and, once, in the Deister range, charcoal burners were encountered, but usually a delightful solitude prevailed.

The undergrowth in the forest was unexpectedly good, partly because when the trees were tall, they were very widely spaced, partly because there were many rocky slopes where the trees could barely get a foothold. One of the most interesting places

botanically was a series of almost vertical cliff faces in the Hohenstein Nature Reserve. The shrubs here were yew, buckthorn, rowan and elder. Among a general limestone flora we noticed particularly the Cheddar pink (*Dianthus caesius*), *Silene italica*, *Biscutella laevigata*, and a marvellous gentian with a single fringed bright-blue flower (*G. ciliata*). Another time we found *Gentiana germanica*, which is a glorified form of our own autumn gentian (*G. amarella*) and has large, deep-blue flowers. The Hohenstein also yielded a collection of most interesting snails characteristic of calcareous places: *Helicigona lapicida*, a flat snail with a sharply keeled shell, *Helicodonta obvoluta*, a bit like a small *Planorbis corneus* with a mouth like a pupa. Our largest pupa, *P. secale*, and peculiarly small *Clausilia rugosa* were there in quantity, accompanied by smaller numbers of species of *Clausilia* strange to us.

In the woods the undergrowth was very varied and some few of the plants do not occur in Britain. Of things which are rare with us a number occurred in fair quantity, among such are the Deadly Nightshade (*Atropa belladonna*), Lily of the Valley (*Convallaria majalis*), May Lily (*Malanthemum biflorum*), Baneberry (*Actaea spicata*) and the Scull-Cap (*Scutellaria galericulata*).

This last was in fruit and showed very well the queer explosive mechanism produced by the post floral development of the calyx. Yellow Balsam (*Impatiens noli-me-tangere*) grew especially well in the neighbourhood of felled timber and, besides the interest of its explosive fruits, we observed that it provided the food for a curious green caterpillar covered with fleshy spines. This is the larva of a saw-fly, although it looks so like that of a Fritillary butterfly.

We found *Anemone hepatica*, which is such a favourite garden plant, growing scattered in the wood just as we might find the Wood Sorrel here; or there for that matter. In one place we found a quantity of a rough rye-like grass (*Hordeum europaeum*) whose heads were covered with ergot. It is a plant not easy to forget for I am still pulling its fruits out of my jersey as I write. The common wild lettuce (*Lactuca muralis*) was one of the most frequent plants in the thin undergrowth of dense forest and in one place a form was noticed with cream coloured flowers. *Carex*

*echinata* too had a peculiarity of colouring, for its fruits, instead of the usual light brown, were almost invariably black. A completely strange tall yellow-flowered Composite, with large lanceolate leaves reminded one of an American Golden-Rod, but turned out to be *Senecio saracenicus*. Another stranger was a bedstraw, growing in the same places as the woodruff but a much larger plant sometimes almost woody at the base. This was probably *Galium sylvaticum*; *G. mollugo* grew in the more open places. *Crepis biennis*, which has been newly discovered in Northumberland, was one of the common plants of the roadside near the woods and was observed to show an astonishing amount of variation in the shape of its leaves. Two strange leguminous crops again caught the eye; the one was a yellow lupin and the second a large species of Birdsfoot (*Ornithopus sativa*), which is a native of Portugal. The latter has dainty variegated pinkish-lavender flowers and the transversely constricted pods (*lomentums*) characteristic of the genus.

Of fungi, it was both too dry and too early to find much, but we were haunted by the odour of the Stinkhorn (*Phallus impudicus*), though only once did we track it to its source. We also found two species of Stags-Horn fungus, the yellow, perhaps *Clavaria muscoides*, was small but a grey one (*C. cinerea*) formed quite large tufts. Rather a lot of mildew had obviously spoilt many of the plants, but of the larger parasitic fungi we saw practically nothing, as perhaps might have been expected since the forest was very clean in other respects.

Of Lepidoptera very little was seen. On the wing were a few Fritillaries and Brimstone butterflies and at rest was the Beech- green Carpet. The larva of *Apoda limacodes* was a most attractive object found on fallen beech leaves. It looks like a tiny yellow-green chiton with pinkish spots round the edge and it moves like slug, but at a quite astonishing rate, considering its lack of legs. We would never dream that it was the larva of a moth if one were not told. In a pond were also noticed the larvae of the Brown China Mark (*Hydrocampa nymphaeata*) cutting out their houses from the water lily leaves and then swimming away in them. Lastly, on a roadside, under a cliff, little heaps of a scarlet

colour were to be seen. On examination these proved to be seething masses of the red bug *Pyrrocharis apterus*, some adult and others in an earlier instar, but, of those brought home, all are now in the adult condition.

I can hardly hope that my tale of the Hohenstein will draw you there as irresistibly as the Pied Piper's music did the children of Hamelin, but I hope that, at least, I have put the place on the map for you.

### SOME NOTES ON FLOWERING PLANTS.

Being the Recorder's Report for 1935.

GEORGE W. TEMPERLEY.

Having recently been appointed "Recorder for Flowering Plants" by the Northern Naturalists' Union, a brief report on some of the records of the past year may not be out of place in the pages of *The Vasculum*. The most interesting event has been the addition to the flora of Northumberland of *Crepis biennis* L. As already reported (*antea* p. 116), a colony of plants of this species was discovered by Miss M. E. Urton near Mitford, Northumberland, in June. This is the first authenticated record for the species between Tees and Tweed. Observers should look out for the plant elsewhere in the area, as it may easily have been overlooked.

The rediscovery of *Calamintha ascendens* Jord. near Coniscliffe by Mr. C. P. Nicholson confirms an old record which appeared in Winch's "Flora of Northumberland and Durham" (1832), thus:-" *Thymus Calamintha* Sm. (= *Calamintha officinalis* Hooker) ... near Conniscliffe, Durham, Mr. E. Robson." Baker and Tate did not include this species in their "New Flora of Northumberland and Durham" (1868), except to remark that "*C. officinalis* is recorded in the Flora as having been gathered by E. Robson at Coniscliffe." Evidently they had not confirmed the old record. Possibly they considered the plant to be an alien here. As it still survives after 100 years its status is improving

Another old record has been confirmed after a long lapse of time. *Cornus succica* L., the Dwarf Cornel, has been rediscovered on the moors north of Rothbury. Hitherto, present-day botanists have only known the Dwarf Cornel in Northumberland on the have on the slopes of Cheviot: where it was first discovered as long ago as the 16<sup>th</sup> century by the Rev, Thomas Penny, Dean of St. Paul's (b.1530 -d. 1589). Baker and Tate, after mentioning the Cheviot station record that it was "found also by the Rev. J. F. Bigge on Riinside Moor." This station was apparently lost, for no one has since reported having noticed the plant in the Rothbury neighbourhood. Its rediscovery in that district is therefore of particular interest.

The discovery of another of our rare plants, *Goodyera repens* Br., at Healey, shows that it is spreading still more widely from its original station in Dipton Wood. It should be searched for in other pine woods in the neighbourhood.

It is interesting to note that *Ligusticum scoticum* L., the Scottish Lovage, call still claim to be an English species. It has long since disappeared from its former most southerly stations- the rocks at Dunstanburgh (1804) and the beach near Bamburgh where Winch recorded it; but a few plants still maintain themselves on the cliffs beyond Berwick at a point just this side of the Border.

If members of the N.N.U. and others interested in our local flowering plants would make a practice of looking up some of the rarer plants recorded by Winch and Baker in days gone by and noting their present status, it would be most helpful.

Early in the year (*antea* p. 76) I made a request for local specimens of *Myriophylla*, the Water-Milfoils, with the object of determining the relative distribution of the three species in our area. Very few specimens have been collected for me. So far I can only report the following:-

*Myriophyllum alterniflorum*.

Stream issuing from Crag Lough.

V.C. 67

Pond at Dryderdale.

V.C.66

*Myriophyllum spicatum*

Pond between Plessev and Blyth.

V.C. 67

Pond at Maidendale Farm, East of Darlington.

V.C. 66

My requests for specimens of Valerian and Agrimony have also met with almost no response, so our information about these genera has made no progress.

During the year I have made fresh contacts with botanists and flower-lovers in various parts of the two Counties and am hoping in the future to obtain more information about the present state of our flora. If observers would take the matter of recording as seriously as the "Recorder" is prepared to do, great progress might be made. Records, reports and specimens should be addressed to me at 4, Selborne Avenue, Low Fell, Gateshead; but to save trouble and postage specimens may be left at the Hancock Museum addressed to me and marked "Plants: open promptly. "

## THE SEDGES OF MUCKLE MOSS.

GEORGE W. TEMPERLEY.

Muckle Moss, near the Northumbrian Loughs, has a botanical reputation. It was here that John Thompson, in 1842, first found *Carex irrigua-Carex magellanica*, as it is now called. He sent it up to Babington, who pronounced it to be a species new to Britain. It has since been found in a few other places, chiefly in the north, but it is a rare species in the British Isles and occurs nowhere else in Northumberland. In appearance it is not unlike *Carex limosa*, known as the Green and Gold Sedge. So close is the resemblance that when you meet *limosa* in a new place you grab it eagerly in the hope that you have discovered a new habitat for its rarer relative. They are both beautiful sedges. Their short green and brown fertile spikelets, suspended on slender peduncles, give them something of the vibrant grace of a Quaking-grass or a Melic. *Carex limosa* is known on a few of our damper Northumbrian mosses, but is not common: Why it should give

place to *magellanica* on Muckle Moss only, is difficult to understand. *Limosa* likes standing water. It cannot tolerate a bog which dries up and leaves it to wither in the Sun. But *magellanica* likes a wetter place still, where it can stand in permanent water the summer through, its spikelets nodding in the breeze above its own beautiful reflection. It is creeping, not caespitose, and occurs sparingly here and there a plant, amongst other sedges, rushes or water loving grasses. Neither species grows much more than a foot or so in height, so they are normally over-topped by their more dominant neighbours. They may best be found by parting the ranker foliage and searching in between.

*Magellanica* is known from *limosa* by its wider, smoother leaves, its longer bracts-often as long as the stem itself-its more numerous but less densely fruited spikelets and the narrower glumes to the fruits.

The most strikingly abundant sedge of Muckle Moss is the common *Carex canescens*. It densely borders every pool of open water and every really wet ditch, with its pale green leaves and its still paler spikes. The margins of the deeper pools it shares with *Carex rostrata* (= *ampullacea*), the Bottle Sedge, which grows in fine masses. Old records and herbarium specimens show that *Carex vesicaria*, the Bladder-sedge, was a plant of this Moss; but it is not there now. This may be the result of a change in the character of the Moss due to artificial draining. *Carex vesicaria* likes to venture out into the deeper waters of permanent pools or slow streams, while *rostrata* is content with shallower and less abiding waters. Has a lowering of the water level of this Moss enabled *rostrata* to oust its cousin *vesicaria* from the pools? Taken together with the disappearance of the Long-leaved Sundew, *Drosera anglica*, from this, one of its few Northumbrian stations, some such change is indicated as having occurred. Another suspicious sign is the growth of large patches of *Polytrichum* where only Shagnum previously grew.

With *Carex canescens* is the ubiquitous *Carex Goodenowii* (= *vulgaris*), the Common Tufted Sedge, and, scattered over the Moss, though nowhere plentiful, is *Carex panicea*, the well-known Carnation-grass.

*Carex stellulata*, the Starry Sedge, is frequent; sticking up its rigid stems with their row of prickly spikelets like starry beads set on a knitting needle.

*Carex pulicaris*, the Flea Sedge, is plentiful, as it is on most of our damp moorland mosses; but here it is accompanied by the rare *Carex pauciflora*, the Few-flowered Sedge—an insignificant little thing, with its two or three tiny spindle-shaped fruits turned back as if eager to detach themselves from the wiry stem. It is only known on one other Northumbrian moss a mile or so to the West.

Another interesting member of the order Cyperaceae, *Rhynchospora alba*, is found on this moss. It is a rare plant in Northumberland, though widely distributed over the British Isles. It is strange that we should have so little of it on our vast moorlands, with their many mosses and flocs which appear to be so suitable for it.

It is impossible to leave Muckle Moss without some reference to its other botanical speciality, *Andromeda polifolia*. This beautiful little plant of the Heath family is not confined to this Moss; but nowhere in Northumberland does it grow in greater profusion. It is to be looked for on the skirts of the heather clumps. When *Calluna vulgaris*, the Common Ling, pauses on the moist rim of a patch of Sphagnum, *Andromeda* ventures to stretch out over the moss, and, partly sheltered by the heather, hangs out its pink bells in the sun. It does not go so far as the bolder Cranberry, *Vaccinium oxycoccus*, which laces the whole moss with the web of its slender stems and bedecks it with the ruby jewels of its dainty flowers; but it is one of that charming company of plants which makes our northern moorlands so attractive to the flower-lover. Just to mention their names is to recall their beauty. The pale-leaved Butterwort, the rosy Sundew, the golden Bog Asphodel and the quaint, elusive *Malaxis* are some of the best known and most admired of the group.



**THE CHRONICLES OF THE ARMSTRONG COLLEGE  
EXPEDITION TO RAASAY (INNER HEBRIDES).**

I. LONGAY.

Monday, August 12th, was fixed for our Longay visit, and all day on Sunday we watched the weather. Would, or would not, the Atlantic gale blow itself out before we started?

Eager to answer this, fully equipped with food and collecting tackle, we went at 9 a.m. to take the boat at Suishnish Rock. There, ready with the boat, we found not only our usual boatman, Ferguson, but also our genial friend Macrae. This made us think, for it really was suspicious. However, away to the north, lying just beneath the "Mermaids," we could perceive a lifeboat fitted with a motor, carrying a crowd of well-dressed islanders. These, we were informed, were going to a Communion Service at Portree, Skye. They sailed first, and as we watched them, all seemed well; we therefore went aboard the "Pride of Longay" quite reassured.

Chug-chugging our way merrily past the pier and Suishnish Point, we soon entered Caol Mohr between Rudha na Cloiche and Scalpay. Once beyond Eyre Point, and out of the shelter of Raasay, however, ominous signs developed. Macrae and Ferguson looked doubtful, the boat pitched violently, and spray drenched us all. Finally, a return was suggested, and, doubtlessly, would have been made had it not been just as uncomfortable to do that as to go ahead so we proceeded.

Matters became worse; at intervals, very heavy rollers came along, and these we could not take broadside on. Thus, in a zigzag fashion, we skirted Scalpay, with our eyes fixed on what was apparently Longay still several miles away, across multitudes "white horses." We consoled ourselves with "Blaydon Races," "Cushy Butterfield," "Keep yor feet still, Geordie hinny" and the like, whilst the waves mounted steadily higher and higher. Our delight can be imagined when, rounding Rudha an Lochai, the North-East point of Scalpay, in the lee of the rocky islets

Sgeir Thraig and Sgeir Dhearg, we discovered that what we had gazed at were the Crowlin Islands, and lying behind Scalpay, not more than two miles away, was Longay, standing out in brilliant sunshine.

Now further difficulties arose; Longay is ironbound by massive rocks. Never at any time is landing easy; what were we to do? Fortunately, although the island consists of fine-grained, red felspathic sandstones, basaltic dykes occur, and in the shelter of one of these we landed. To get to the top of the island was our next problem, and the feat was accomplished by scrambling on hands and knees up a narrow, steep slope, between two perpendicular cliffs, covered with Primrose almost nestling on *Zostera*, Heather, Crowberry, Bracken, Hairy Bitter Cress, Violet, Dock and Wood-sage. The cliffs afforded footholds to Holly, Dogrose, the English Stonecrop, Thrift, Sea Spleenwort, and even the common Polypody Fern and Bluebells.

Once on top, most of the party built a fire to dry themselves, whilst the drier members, anxious to make the most of the day, pressed on. The vegetation was astounding, not because of the abundance of the species, but for its luxuriance and the curious nature of the plant communities. Heather and Bracken grew chest high, almost defying our efforts to penetrate further. By strenuous efforts we advanced, and everywhere a remarkable fact was forced upon us: even the commonest grasses were rare or absent. And why? The answer was obviously "rabbits." Amongst these latter, numerous black individuals occurred.

Pressing forward, we struck North-West, determined to examine the thickets we had seen crowding the little valleys leading backwards from the cliff tops. They proved to be composed of *Salix cinerea*, *S. aurita*, Birch and Mountain Ash, forming curiously compact masses, with a very unusual undergrowth of Bluebells and Sheep's Sorrel.

As we proceeded, it was the occurrence of further unexpected plant combinations which struck us most. Here it was acres of Golden Rod with *Rumex acetosella*, there Sphagnum with *Sedum anglicum*, yet again Bracken with Aspen, Bracken with Honeysuckle, then Rushes with white-flowered Self Heal and so on.

Thus we ransacked the island, first with one eye on the stormy sea for it was very evident that return that day might be impossible and then with an eye on the look-out for caves in which, if compelled, we could pass the night. Of these many were considered suitable.

During our wanderings, in addition to the plants just named, we found Tutsan, the Beautiful St. John's Wort, Water Drop-wort, Lesser Spearwort, Willow Herb, Wood rush, Burdock, Sandwort, Cat's Ear, Woodsorrel, Foxglove, Sweet Gale, Round-leaved Sundew, Butterwort, Bugle, Bearberry, Bilberry, Marsh Violet, Heath Bedstraw, Ragged Robin, Chickweed, Nettle, Tormantil, Creeping Buttercup, Golden Saxifrage, Bramble, Devil's Bit Scabious, Cleavers, Birds Foot Trefoil, Holly and Ivy (one spreadeagled against the cliffs and the other climbing up them), with Beech Fern and Hard Fern, and last, but not least, White Heather four feet high and Fine Leaved Heath, with flushed pink flowers, also nearly four feet high.

Nor were butterflies and moths neglected; of the former we found the Small Tortoiseshell and the Green Veined White, and of the latter the Iron Prominent, the Pebbled Prominent, the Poplar Hawk, the Puss Moth, the Small Chocolate Tip, the Broom Moth, the Brimstone, the Fox, the Ruby Tiger, the Ruddy High Flier, the Marbled Carpet, and feeding on the Heather, a very strange food plant, the Currant Moth.

Wherever we went humble bees boomed by; *Bombus lucorum*, and *B. agrorum* abounded, but with them were the ever-welcome *B. jonellus* and the remarkable *B. smithianus*, restricted to fringing islands.

And so we crossed and recrossed the island until it began to dawn upon us that not only were human inhabitants absent, but, in addition, no drinking water was available. Naturally, this only made our thirst worse. Some were lucky and found trickles down the Cliffs; the less fortunate squeezed clean Sphagnum for its Water.

One small pool was detected, but the juice of very dead seagulls was not very tempting even to thirsty mortals like our eyes very differently apparently was the opinion of the water beetle *Agabus bipustulatus* which swam gaily amongst it!

Seven O' clock found us all assembled on the basalt dyke, casting anxious eyes seaward; but no speck was there. Were we to be left all night? No, for just as we despaired, from a quite unexpected direction appeared the faithful Ferguson with the "Pride." We quickly got aboard, to be informed at once that no return voyage via Caol Mohr could be made. The only possibility was to round Scalpay, and to sail between that island and Skye. Beguiling the journey with songs of varying degrees of tunefulness, we had a very enjoyable sail, calculating, as we passed, how many cups of tea and bottles of lemonade the white cottages visible on Skye could produce, until an ominous crash and a racing motor foreshadowed disaster. Knowing the character of Caol Scalpay, all we could think of was a sunken rock and a smashed propeller. Ferguson, suspending himself perilously over the boat-side, soon diagnosed the trouble as a propeller fouled by seaweed. He, therefore, armed with a boat hook, balanced himself in some extraordinary manner over the stern. The Professor held his sea-boots like grim death, whilst "Wor Porcy" held the Professor's hands until, strand by strand, the tangle of seaweed was un-ravelled. We cheered and sang when "All Clear" was signalled, but all too soon! The motor would not start; only after nearly two hours did we go ahead.

But the cloud of delay had a silver lining. Through it we were enabled to enjoy the most magnificent views of the sunset over the Cuillins, and of nightfall casting its shadows over Glamaig-the scene of other exploits. Finally, in perfect safety, Suishnish Rock was reached, and we trooped ashore. All were very proud, indeed of themselves when we were informed that, a quarter of an hour after the Communion boat had sailed in the morning, it had had to put back into Oskaig with practically the whole of its passengers sea- sick, whilst we, despite the heavy seas and various adventures we had faced, had escaped.

## THE SOCIETIES.

### NORTHERN NATURALISTS' UNION.

The second field meeting of the season was held on July 6th, at Shull a place whose natural attractions are increased by the charming hospitality always extended to naturalists by Mr. and Mrs. J. E. Hodgkin. The morning was spoiled for some by the contractor's failure to provide the transport which had been arranged from Bishop Auckland, but in spite of all difficulties some fifty reached the Hall, where they were welcomed by Mr. Hodgkin and made free of the Parks. After a picnic lunch on the slope below the house small parties wandered in various directions to explore the estate. One encountered a fierce young sparrow hawk which disputed the way with it, and at another point traced a fearsome smell to the Stinkhorn fungus (*Phallus impudicus*). Among the interesting flowers found were the Small Wintergreen (*Pyrola minor*), Cranberry (*Vaccinium oxycoccus*), and the Small Skullcap (*Scutellaria minor*) which has already been reported by Mr. Temperley. The ponds were a pleasant sight with dragon-flies in large numbers flying across, and white water lilies dotting the surface. Botanists also noted with interest the very rich flowering of *Potamogeton polygonifolius* and *Myriophyllum aterniflorum*. On our visit in 1932 the lowest pond across the road yielded quantities of *Nitella*, but this time the plant appeared to be absent.

Entomologists were less favoured than the botanists, butterflies being scarce, though it was pleasant to see the Orange Tip flourishing. Mr J. W. Thompson beat for larvae with the greatest energy, but his bag was disappointingly small, though in view of the rarity of the Vanessids in the early summer he was glad to find the Small Tortoise-shell. In the afternoon our hosts most kindly served tea on the terrace, a very pleasant finish to a delightful day.

The President and a few members arrived at Witton-le-Wear Friday, July 5th, and spent a profitable week-end at "The Towers ", whence they visited various places on the Wear and

found a rich and varied flora. A roadside group of the two mignonettes (*Reseda lutea* and *R. luteola*) with the Smooth Hawk's Beard (*Crepis virens*) and the Viper's Bugloss (*Echium vulgare*) by the river at Witton-le-Wear was sufficiently striking to deserve mention. This locality was one of the best discovered and seemed worth fuller exploration.

#### AUTUMN MEETING.

The Autumn meeting of the Union will be held in the Sunderland Technical College on November 30th, when Professor A. D. Hobson will read a paper. Tea will be provided in the College, and after it the local societies (Sunderland Naturalists' Association, the College Biological Society, and West Park Natural History Society) invite the members to a conversazione in that building.

#### WALLIS CLUB.

#### SUMMER EXCURSIONS.

There was a good gathering at the first excursion of the year held at Ebchester on April 27th. The route lay by the river path to Shotley Bridge on the Northumbrian side of the Derwent. Mr. Ruxton led.

On May 25th a large gathering, including members of the N.H.S., assembled at the Dove Marine Laboratory under the leadership of Prof. A. D. Hobson. After viewing the tanks, some collecting was done on the rocks immediately to the North.

On the third excursion to the old hunting grounds of Morden Carr and Bradbury it was noteworthy that owing to the continued drought flowers were very scarce, and some of the ditches had recently been cleaned of vegetation. Varieties of *Planorbis carinatus* and *Limnaea stagnalis* were still to be found there.

The extensive salt marsh of the estuary of the R. Wansbeck was investigated on July 13th under the leadership of Dr. H. O. Bull. The local brackish water slugs *Alderia modesta* and *Limapontia depressa* were very abundant. In a drainage ditch to the North of the estuary were found *Chara* and *Hydrobia jenkinsi*.

The last excursion of the season to Bellasis Bridge on the R. Blyth, held on September 28th, was too late for many flowering plants. A large flock of Golden Plover were seen. *Anodonta anatina* and *Planorbis carinatus* were amongst the Molluscs noted.

#### DARLINGTON AND TEESDALE NATURALISTS' FIELD CLUB.

A well-attended excursion took place on June 29th, under the leadership of Mr. H. D. Pritchett, F.R.I.B.A., to Witton Castle and Escombe. The castle was inspected from roof to dungeons, the leader explaining the archaeological and historical features. In the gardens the ancient yew hedges were much admired, also a fern-leaved beech tree, 9 feet in circumference at 3 feet from the ground. At Escombe the leader described the Saxon church.

On August 10th a small party visited Easby Abbey, Richmond Castle and parish church, the leader, Mr. Pritchett, describing the interesting features of them all.

August 24th.-Brancepeth Castle and church, also the city of Durham, were visited by a party of 15, the leader, Mr. Pritchett, again explaining archaeological features of both the castle and the beautiful old church. Some places of interest in Durham were visited.

October 5th. The ruins of Sockburn church, which dates from Saxon times, were visited by a party of 14, Mr. Pritchett acting as leader.

The footpaths section has been most active during the summer, having a walk about once a fortnight. Many of the walks have been in the Barnard Castle district of the Tees valley, with the object of noting glacial boulders of shap granite, Brockram and other rocks. A large number have been noted and much useful information put on record. On other walks of the section the various strata exposed in the bed of the Tees have been recorded.

On August 20th, under the leadership of Mr. C. P. Nicholson (footpaths section organiser), a party of five members walked from Garrigill over Cross Fell to the source of the Tees, there

following the stream down as far as Langdon Beck. Much interesting information was recorded on a walk of 25 miles and a climb of 1,700 feet.

Indoor meetings have been held every Tuesday evening, at which there has been no lack of specimens ornithological, botanical, entomological and geological, and many reports of members observations have been given.

On May 28th it was reported that Mr. Birley had discovered a concrete floor at the Roman station at Piercebridge, possibly of 4th century work. A museum containing articles found during the recent excavations has been opened in the village. Mr. J. B. Nicholson reported the arrival of Swifts in the town on May 15th. On June 4th Mr. Gordon Wood reported having seen two ravens at Cronkley Fell during the week-end. On June 18th mention was made of Blue Tits stripping fur from rabbit skins and using it to line their nests.

On July 2nd Mr. J. E. Nowers spoke of a Hedge-sparrow's nest at Haughton-le-Skerne, built in the angle formed by the stem and a leaf of a broccoli plant; 5 eggs were laid, four hatched, but only one young bird survived to flyaway.

On July 9th a report was given on an old sulphur bath, which had been visited by a number of members on July 3rd. Situated near the old Fish Locks at Dinsdale, it has been recently excavated, and is a walled rectangle about 5 feet deep, 9 feet by 8 feet 10 1/2 inches, and the stone walls are about 15 inches thick. Mr. H. D. Pritchett considers the work to be 12th or 13th century. There is a strong spring in the bottom, the water slightly alkaline and very rich in sulphur, much of which is deposited on the stones over which the water flows.

Mr. A. Stainthorpe reported that he had seen a number of Redshank on the moors near Barnard Castle. This bird appears to be extending its range, as a few years ago it was rare on the moors.

July 16th. At this meeting the death of Mr. James Broadhead, which took place on July 13th after a very long illness, was announced. He was an old and valued member of the club, joining in 1907; was elected president in 1910 and again in 1926,



and held the office of librarian from 1915 to 1928. He has always been a live member and a driving power in the club, and his influence in its management will be greatly missed. He read eight papers on mineralogical subjects before the club. A vote of sympathy with his family was passed.

Mr. A. Stainthorpe reported that he had seen and heard a party of five ravens near Mickle Fell on the previous Saturday, also a very large flock of starlings, estimated at 10,000 in a spruce wood near Langdon Beck.

On September 3rd a report was made by Mr. A. Stainthorpe of a visit he and other members paid to Darlington sewage farm for the purpose of observing birds. Twenty-eight species were noted, including whinchat, yellow and pied wagtails, tree and meadow pipits, four swifts, snipe, sandpiper, dunlin, ring plover, redshank, greenshank, black-tailed godwit and five ruffs. Some of these birds are on migration and only halting for a short time: but the list indicates the wealth of bird life which would be attracted there if it were made a bird sanctuary and shooting stopped.

September 10th. In reporting a footpaths section walk it was mentioned that a flock of about 100 golden plover were seen near Staindrop. Mr. J. E. Nowers gave some notes on the injurious weeds scheduled by the Ministry of Agriculture, stating that the ragwort (*Senecio jacobaea*) has been found to be poisonous to cattle.

Mr. R. Watkin reported another visit to Darlington Sewage Farm on September 5th, the list of observations including ring plover, wheatear, five redshank, curlew-sandpiper (this was last seen eight years ago), tree pipit, common sandpiper, 30 yellow wagtails and many snipe. This shows a great variation from the species noted a week ago.

September 17th. Miss K. B. Smith reported a kingfisher (this year's bird) killed by a cat in the centre of the town near the Skerne. Another visit to the Sewage Farm (September 11th) was reported, with a much smaller list of birds, including three redshanks, a dunlin, pied wagtails, no yellow wagtails, and many snipe.

## NATURAL HISTORY SOCIETY, N. D. &amp; N.

## SYLLABUS FOR THE WINTER SESSION.

The popular Saturday evening lectures are four in number, in which the lecturers will share with their hearers their experiences in the pursuit of the study of nature abroad. The fields covered are the Sahara, South Africa, Irish Light Stations, and Finland and the Arctic. These are free to the public, commencing at 7.30 p.m.

The Sectional Meetings also present a strong programme, and if, as in the Botanical Section, the subjects are all general rather than local, so much the better for the local work; the broad base is the only safe one. The other sections because of the plan of their work adhere more closely to the local, but before this appears in print Mr. Tully will have opened the season by introducing the most interesting subject of 'Bird Territory.'

## THE VISCOUNT GREY MEMORIAL.

"It is proposed that a permanent North Country Memorial to commemorate the life of that great Statesman and Naturalist, the late Viscount Grey of Fallodon. It will take the form of a tablet to his memory, to be placed in the Hancock Museum, and the foundation of a Trust Fund, the income from which will be applied to the endowment of the Museum." So writes Lord Armstrong, President of the Society, in making a public appeal. Contributions, which may be spread over a period of years, should be sent to Lord Armstrong at the Hancock Museum, or to Mr. J. A. T. Middleton, Hon. Treasurer of the Appeal Fund, at Lloyd's Bank, Ltd., Grey Street, Newcastle upon Tyne.

(For myself and colleagues, I heartily commend the appeal to readers of *The Vasculum*.-J. E. HULL.)

## NOTES AND RECORDS.

### NOTES.

#### **Immigrant Lepidoptera in the Team Valley.**

In spite of my son's report on page 109, the Red Admiral (*Pyrameis atalanta*) has appeared quite commonly with us during August and September. First noted on August 20th, it has haunted the Buddleias and other flowers in greater or less abundance. *Plusia gamma* was observed at heather fowers on August 27th on Birtley Fell, and odd examples have occurred

during September in the same area. However, the best species seen amongst the immigrants was the Bedstraw Hawk Moth (*Deilephila galii*) discussed below.-J. W. HESLOP HARRISON.

#### **Curious flowers of the Goat's Beard (*Tragopogon pratense*).**

Everyone, I suppose, is more or less familiar with the "Hen and Chickens" daisy, in which the ordinary head or capitulum gives rise to a series of smaller daisies. A Goat's Beard plant growing near the Target Heap, Birtley, bore numbers of flowers, all of the same nature. Another plant, not far away, possessed green flowers with the whole of the florets broken into threadlike appendages, recalling to some extent the Bedeguar galls on roses. No parasite was detected as the possible inciting agent, despite careful examination.-J. W. HESLOP HARRISON.

#### **"Blues" and "Coppers" in 1935.**

In spite of my previous note, the Small Copper Butterfly (*Chrysophanus phlaeas*) must have done really well in its first brood, for the second brood has been on the wing in unprecedented numbers everywhere in this area in stations likely and unlikely. In a sand pit, just west of Birtley, where hundreds flew, five were seen on one ragwort head. As for the Common Blue (*Lycæna icarus*), once again the occurrence of the second brood can be recorded in late August and early September.-J. W. HESLOP HARRISON.

#### **The alleged occurrence of the Dwarf Juniper (*Juniperus sibirica*) in Durham.**

Druce, in his Comital Flora, reports this plant for Durham, and I have seen similar notes elsewhere. Can anyone supply the basis for these records? I believe I have seen juniper in most of its stations in our counties, but all of the plants examined were simply common Junipers. I admit that those on the coast have the habit of the Dwarf Juniper: in spite of that they are *Juniperus communis*, and nothing more, adapting their habit of growth to a windswept habitat.- J. W. HESLOP HARRISON.

#### **The abundance of White Beams (*Pyrus aria*) in certain Durham localities.**

Recently I have had considerable opportunities of examining out of the way paths, extending from Brancepeth westward, from the natural history standpoint, and have been surprised at the extraordinary number of White

Beams occurring in the hedgerows. Have these been planted and, if so, why? All are well grown trees of some age and cause wonder as to the reasons for their presence. -J. W. HESLOP HARRISON,

#### **The distribution of the Horse Ant (*Formica rufa*) in Northumberland and Durham.**

It would be interesting to know the precise local distribution of this ant. I know it personally from Hexham to Chopwell, chiefly, but not always in pine woods. Similarly, I have observed it in woods not far from Eggleston and recently, I examined a huge nest near Blanchland.-J. W. HESLOP HARRISON.

#### **Curious larva of the Peppered Moth (*Amphidasys betularia*).**

As I do annually in late August, I beat the oaks near Birtley for larvae of this species and of *Selenia lunaria*. The latter did not turn up, but the former was as abundant as ever. Amongst the individuals captured was one which lacked the hump on the left side of the 5th abdominal segment.-J. W. HESLOP HARRISON.

#### **Aspen thickets near East Butsfield and their tenants.**

As I have repeatedly pointed out, aspens are not so common as one would expect locally. The detection, therefore, of two colonies near East Butsfield invited an examination of their lepidopterous tenants, and raised hopes of finding larvae of the Poplar Lutestring (*Cymatophara or*). None were taken, but the species found were interesting enough, for they included the Puss Moth (*Cerura vinula*), the Poplar Hawk (*Smerinthus populi*), the Pebbled Prominent (*Notodona ziczac*), and the Swallow Prominent (*Pheosia tremula*).-J. W. HESLOP HARRISON.

#### **The Roses in a lane near West Butsfield.**

Accustomed as one is to the enormous abundance of *Rosa mollis* on the roadsides in the area just south of the Sneap, I felt considerable surprise when I found that the rose population in lanes south of this again showed tremendous falling off in *Rosa mollis* with a great increase in *glaucoptlylla* (*glauca* auct.) and *coriifolia* forms. The varieties collected included *stephanocarpa*, *glaucoptlylla*, *myriodonta*, *jurassica*, *Bakeri*, *frutetorum*, *coriifolia* (*typica*) and *Watsani*. Good typical *stephanocarpa* is always welcome in Durham stations.-J. W. HESLOP HARRISON.

#### **Late larvae of *Cidaria miata* (Autumnal Green Carpet).**

Small larvae of this species beaten from birch near Lanchester on September 18th all proved to be stung.-J. W. HESLOP HARRISON.

#### **The Humming Bird Hawk Moth at Birtley.**

*Macraglossa stellatarum*, one of our immigrant moths, paid a visit to the Veronica flowers in our garden on September 11th ; the specimen is the only one seen this season.-GEORGE HESLOP HARRISON.

### **Black larvae of the Common Carpet (*Melanippe sociata*).**

For several years I have been drawing attention to the fact that many lepidopterous species hereabout; have been developing black larvae, and have supplied lists of forms so affected. Amongst these, however, *Melanippe sociata* was not included. In July, a female of this species, captured on Waldrige Fell, laid eggs which duly hatched and gave rise to larvae which, when they reached the last instar, were patternless and coal black in colour except for one example. This exception was a smoky grey, and the usual dorsal markings could be discerned underneath the suffusions.-J. W. HESLOP HARRISON.

### **Redcar Field, Darlington.**

Very little is now left of this once famous boggy collecting ground between Harrogate Hill, Darlington and Coatham Mundeville, owing to cultivation and building operations. The following plants are still to be found there: *Ranunculus flammula*, *Epilobium parviflorum*, *Hydrocotyle vulgaris*, *Scabiosa succisa*, *Achillea ptarmica*, *Senecio aquaticus*, *Cnicus palustris*, *Pedicularis palustris*, *Triglochin palustre*, *Juncus obtusiflorus*, and *Eriophorum angustifolium*.-J. E. NOWERS.

### **Immigrant Lepidoptera in North Northumberland.**

Though weather conditions were excellent in the early part of the season a single Painted Lady and one Red Admiral are all that I can record before the middle of August. After the break in the weather a few Red Admirals appeared but never more than two on anyone day except on the occasion of a visit to the College Burn when I encountered four or five. *Plusia gamma* has also been under the average in my garden, but I flushed several fine specimens while trimming the rockeries in September. August 31st was a red letter day, for on that day my wife and son while on a fungus foray (for *Agaricus campestris*!) fell in with a *Colias croceus* by the roadside near Wareley farm, about a mile west of Budle Bay.-J. E. HULL.

### **Bird Notes from Waren Mill.**

The first flock of wild geese passed over on 10th October, in number about sixty. The same morning a Pink-footed Goose joined my Chinese geese on the creek at Waren Mill. It was tame but could fly a little. It took to its new quarters at once and is now quite at home.-T. B. SHORT.

### **The Brown Argus and Durham Coast Habitats.**

As a result of four visits to Blackhalls I can report the Brown Argus still to be there in large numbers. On June 22nd they were not out. On June 29th I saw and captured one specimen only, a fine *vedrae*. On July 6th the insect was about in large numbers and among my captures were one *caeruleopuncta*, two with discal spots of blue and white scales, one *vedrae*, and two *artaxerxes*. On July 13th a brief visit revealed *agestis* still abundant. Of those examined many were somewhat worn, but I retained three specimens of *artaxerxes* with very small discal spots and two of *albi-annulata*.-J. NEWTON.

[At dates later than Mr. Newton's visits the damage done to the colonies by campers was very serious indeed. At several points the rock-rose was almost completely destroyed, and the more recently discovered habitats in which we had hoped the insect would flourish for years, were in a desperate condition. To indicate how far destruction has proceeded, I need only state that the coast habitats of the Birds-eye Primrose are now restricted to four or five square yards; that the Least Minor is completely wiped out of its northern hollows; and that no rock-rose plants at all grow where the late Mr. J. R. Johnson made his best captures of *Aricia agestis*.- J. W. H. H.]

## RECORDS.

### BIRDS.

*Pandion haliaetus* L. The Osprey. 68  
A young female was picked up dead at the Snook, Holy Island, on August 24th, 1935. Measurement: wing-tip to wing-tip 5 feet 4 1/4 inches. Stomach empty except for a small piece of moss 3/8 of an inch long.-W. de L. AITCHISON, Killingworth Hall.

### INSECTA.

LEPIDOPTERA. Butterflies and Moths.

*Eupithecia linariata* W. V. Toadflax Pug. 66  
This pretty little moth has but rarely been seen in our counties, casual records from South East Durham supplying the only occurrences. In the middle of August, an exceptionally late date, I captured a female specimen resting on a fence near Birtley. An immense bed of Toadflax adjacent to this bed clearly supplied the food plant.-J. W. HESLOP HARRISON.

*Acronycta rumicis* L. The Knot Grass. 66  
When I first commenced to interest myself in the lepidoptera this moth was common everywhere with us. However, it seemed to disappear in the Team Valley about 1906, and, in fact, I never saw Durham specimens again until last week when I noticed larvae feeding on bramble a mile or so from Knitsley. They were interesting inasmuch as the colour was a pale grey, with the usually brighter markings very dull. They contrasted greatly with the brilliant Hebridean forms seen so abundantly a month before. These Scotch examples were not unlike the Birtley specimen taken years ago.-J. W. HESLOP HARRISON.

*Notodonta dromedarius* L. Iron Prominent. 66  
Larvae on birch along the Wearside just above Fatfield.

*Erynnis tages* L. Dingy Skipper. 66  
On the wing in good numbers at Blackhalls on June 22nd. On July 6th I saw one only and on July 13th took two still in fairly good condition. They seemed to be attracted by marshy ground.- J. NEWTON.

- Zygaena filipendulae** L. Six-spot Burnet. 66, 68  
 Numerous by the side of Norton road, Sadberge.-J. E. Nowers,  
 Plentiful on grass at the top of the cliff near Cullernose Point.- J. E. HULL.
- Cerura vinula** L. Puss Moth. 66  
 Larvae were found on 16 out of 46 young poplars by the Side of Durham Road, Beaumont Hill,  
 Darlington.-J. E. Nowers.
- Chaerocampa elpenor** L. Elephant Hawk-moth. 66  
 About twenty larvae have been brought to or reported at the meetings of the Darlington and  
 Teesdale Naturalists' Field Club during August and September from various parts of the town  
 where Rose-bay Willow-herb is plentiful. It seems to be establishing itself in the town, for only two  
 or three were reported last year.-J. E. Nowers.
- Apamea unanims** Tr. Small Clouded Brindle. 67  
 Common on the banks of the Tyne between Prudhoe and Ovingharn.
- Sphinx convolvuli** L. Convolvulus Hawk. 66  
 A good specimen taken near the railway station Birtley, Oct. 1st. -J. W. H. H.  
 Staindrop Road, Darlington.-B. R. Lucas.
- Geometra papilionaria** L. Large Emerald. 66  
 Dryderdale.-R. H. SARGENT.
- Colias croceus** Four. Clouded Yellow. 68  
 Wareley, Belford, 31st August, 1935, a male in very good condition.-P. G. HULL.
- Calocampa exoleta** L. Swordgrass. 68  
 Comes freely to sugar. Also bred from larva.-P. G. HULL.
- Deilephila galii** L. Bedstraw Hawk. 66  
 As far as I know, this fine immigrant has not been captured in Durham since 1888. On Sunday,  
 August 18th, Master Arthur Bolton brought a single larva to me which he had collected from  
 Willow-herb (*Epilobium angustifolium*) near Birtley. Later, both he and my two sons obtained  
 others from the same beds of plants. These larvae varied in colour, for some were dark olive green  
 with the usual black edged dorsal eyespots, whilst others were purplish. All pupated safely.-J. W.  
 HESLOP HARRISON.
- Dasystoma salicella** Hb. 66  
 This interesting little moth, which I have reported previously from Birtley, Lamesley and Gibside,  
 has now occurred commonly on Birtley Fell (Southern end) and at Beamish.-J. W. HESLOP  
 HARRISON.
- Scoliopteryx libatrix** L. Herald. 66  
 A moth which has become exceedingly rare with us in recent years; bred from larvae taken in our  
 own garden at Birtley, in September this year.-J. W. HESLOP HARRISON.

HYMENOPTERA. Bees, etc.

**Mellinus arvensis** L. 66  
In great number in a sand pit in late August and early September Birtley.-J. W. HESLOP HARRISON.

HEMIPTERA-HETEROPTERA. Bugs, etc.

**Derephysia foliacea** Fall. 66  
It is years since I saw a Tingid bug locally. I was therefore glad to capture this beautiful species at Blackhalls in very late August. -J. W. HESLOP HARRISON.

**ARACHNIDA.**

ERIOPHYIDAE.

**Eriophyes atrichus** 66  
On *Stellaria graminea*, West Buttsfield.-J. W. HESLOP HARRISON.

**FLOWERING PLANTS.**

**Calamintha ascendens** Jord. Calamint. 66a  
On a hedge-bank sloping back from the top of a roadside wall High Coniscliffe, September, 1935. Named as above by Mr. H. W. Pugsley and apparently a confirmation of an old record of "Thymus calamintha," on the authority of Edward Robson, in Winch's "Flora."-C. P. NICHOLSON.

**Galium erectum** Huds. Upright Bedstraw. 66  
In an old quarry, Witton-le-Wear.-J. E. NOWERS.

**Lepidium smithii** Hook. 66  
Smith's Cress. Same place as above.-J. E. N.

**Helleborus viridis** L. 66  
Green Hellebore. Near old Fish Locks, Dinsdale.-J. E. N.

**Aconitum napellus** L. Monkshood. 66  
Same place as foregoing.-J. E. N.

**Senecio erucifolius** L. Hoary Ragwort. 66  
Norton Road, Sadberge, and Salter's Lane, Darlington.-J. E. N.

**Trollius europaeus** L. Globe Flower 66  
On some marshy ground near the water-works within the borough of Darlington.-R. WATKIN.

**Ranunculus Lingua** L. Greater Spearwort. 67  
Benridge Bog, near Higham Dykes.-M. E. URTON.

**Diplotaxis muralis** DC. 67  
Still plentiful at Seaton Sluice and at Amble.-M. E. URTON.

This species was recorded by Winch (1832) as a "ballast hill" plant on the Tyne "introduced from the South of England." It was first noticed at Seaton Sluice by J. G. Baker in 1863, who found it "plentiful on ballast" there. It was first recorded as "On ballast at Amble" in Luckley's "Flora of Alnwick" (1893). It has retained its station and is now well established at both places.-G. W. TEMPERLEY.



- Lythrum Salicaria** L. Purple Loosestrife. 67  
Benridge Bog, near Higham Dykes.-M. E. URTON.
- Ligusticum scoticum** L. Scottish Lovage. 68  
A few plants south of the Border on the cliffs near Berwick.-J. B. DUNCAN.
- Heracleum sphondylium** var. *angustifolium* Huds. Hogweed. 68  
Near Weldon Bridge.-M. E. URTON.  
This curious variety of the Hogweed is rarely reported from our district. Has it hitherto been overlooked -G. W. TEMPERLEY.
- Inula Helenium** L. Elecampane. 67  
Long Horsley.-M. E. URTON.
- Clinopodium vulgare** L. Wild Basil. 68  
Weldon Bridge.-M. E. URTON.
- Mercurialis annua** L. Annual Dog's Mercury. 67  
Very plentiful on old slag-heaps at Seaton Sluice.-M. E. URTON.  
Baker & Tate said of this species that it was "very rare as a weed."  
It has occurred more frequently of late. Mr. A. W. Bartlett reports it from waste ground near Armstrong College.-G. W. TEMPERLEY.
- Goodyera repens** Br. Creeping Goodyera. 67  
Pine woods near Healey. Reported by Mr. G. Warde-Aldham.
- Chenopodium murale** L. Goosefoot. 66  
By the edge of a field path near Picktree.-J. W. H. H.
- Lycopsis arvensis** L. 66  
Sandy field near the Brooms, Birtley.-J. W. H. H.
- Polygala dubia** Bell. Milkwort. 66  
Blackhall Rocks.-J. W. H. H.
- \*Lamium molucellifolium** Fe. Dead Nettle. 66  
Apparently the first Durham record: between Birtley and Chester-le-Street.-J. W. H. H.
- Plantago Coronopus** var. *latifolia* D.C. Stagshorn. 66  
Very fine form south of Blackhalls.-J. W. H. H.
- Centaurea obscura** Jord. Black Knapweed. 66  
*Wide* collecting in the Birtley District, except near Vigo, produced this segregate only.-J. W. H. H.
- Centaurea nemoralis** Jord. Knapweed. 66  
Blackhall Rocks and Vigo. A large number of plants gathered in the former locality were all of this form.-J. W. H. H.
- Gnaphalium sylvaticum** L. Cudweed. 66  
Abundant at one part on Beamish Moor.-J. W. H. H.
- Rosa mollis x R. dumetorum**. Hybrid Rose. 66  
I recorded this rose as *Rosa pseudomollis* in the last number of *The Vasculum*, but now I find it is a novel hybrid with the above parentage. The strange structure of certain flowers, the abortion of 99% of the fruits and the absence of seeds in the fruits developed caused me to re-examine the plant and to alter its status. It looks in general appearance very like *R. pseudomollis*.-J. W. HESLOP HARRISON.

- Malaxis paludosa** S.W. 67  
As the late Mr. Chas. Robson has indicated in his notes that he has seen this species in the Harnham area, it seems necessary that the locality should be examined now. His note dates from 1882.-J. W. H. H.
- \*Juncus tenuis** Willd. Rush. 66  
Although I know that the present is not the correct name of this North American species, I prefer to use it as recognisable by everyone until the real name is fixed. The plant has not been previously reported from Durham; nevertheless, I found good sturdy plants on sandy ground between Birtley and Urpeth.-J. W. HESLOP HARRISON.
- Linum perenne** L. Flax. 66  
Common enough on the south east side of Penshaw
- Hypericum dubium** Leers. St. John's Wort. 66  
Abundant in a clay pit near Birtley.-J. W. H. H.
- Chenopodium urbicum** L. Goosefoot. 66  
In immense quantities at one station near Birtley.-J. W. H. H.
- Viola agrestis** Jord. Pansy. 66  
Very common Birtley.
- V. segetalis** Jord. Pansy. 66  
Common in the Team Valley.
- V. latifolia** Drabble. Pansy. 66  
Rare between Birtley and Chester-le-Street.
- V. obtusifolia** Jord. Pansy. 66  
Also rare: same localities.
- V. arvensis** Jord. Pansy. 66  
Very rare: east of Birtley.
- V. ruralis** Boreau. Pansy. 66  
Rare: Team Valley.
- V. Lloydii** Jord. Pansy. 67  
Wylam.
- V. Lejeunei** Jord. 66,67  
Ovingham. Not uncommon near West Buttsfield.
- V. lepida** Jord. 66,67  
Ovingham. Several places in the Team Valley.-J.W. HESLOP HARRISON
- Scandix Pecten-Veneris** L.
- Ranunculus arvensis** L. 66a  
Cornfield near Bradbury.-A. W. B.
- Cnicus heterophyllus** Willd. 66d  
The Sneap.-A. W. B.
- Lamium hybridum** Vill. (**incisum**). Dead Nettle. 68  
Turnip field near Felkington, September.-J. E. H.
- Valerianella dentata** Koch. Field Lamb's Lettuce. 68  
The field where it abounded on Swinhoe farm, Middleton, is now wholly planted with spruce, and the plant is gone; but it is still in my garden.-J. E. H.

- Epilobium tetragonum** L. Glossy-leaved Willow-herb. 68  
 I have allowed a small colony to remain in my garden but the Kirknewton record is still the only one I can give for the rest of 68.-J. E. H.
- Viola deseglisei** Jord. Upright Field Pansy. 68  
 The most frequent of the *tricolor* group in fields and gardens hereabouts.-J. E. H.
- Viola lepida** Jord. Large-flowered Field Pansy. 68  
 Easington Crag and Vicarage garden, Belford.-J. E. H.
- Viola anglica** Jord. Decumbent Field Pansy. 68  
 Cultivated fields, Belford.-J. E. H.
- BRYOPHYTES.**  
**HEPATICA**E. Liverworts.
- Blasia pusilla** L. 68b  
 Linshield Bridge, R. Coquet.-A. W. BARTLETT.
- Preissia quadrata** (Scop.) Nees, 67d  
 Rocks by the Tyne, Styford.-A. W. B.
- FUNGI.**
- Clavaria aurea** (Schseff.) Fr. 67c  
 Wood between Chipchase Castle and Wark.-A. W. B.
- Clavaria cinerea** (Bull.) Fr. var. **gracile** Rea. 67a  
 Plessey Woods.-A. W. B.
- Puccinia antirrhini** D. & H. 66a  
 Garden at Sadberge.-A. W. B.
- Rutstroemia firma** (Karst.) Pers. 66d  
 The Sneap, R. Derwent.-A. W. B.
- Entomophthora americana**. 66d  
 On a fly at the Sneap.-A. W. B.
- Craterium minutum** Fr. 66b  
 Birtley.-A. W. B.

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### EDITORIAL NOTES.

With this number *The Vasculum* attains its majority. Born in war-time, as a babe in arms it was serenely happy. Once on its feet it had to meet the buffeting of fierce storms which laid low many of its older neighbours. Kind supporting hands were not wanting, and it came through the severe trial without material damage. In its later teens it has faced the difficulties which beset a "depressed area" with gratifying fortitude. The pressure however, is not yet a thing of the past and a few more helping hands would be very welcome. Our only means of advertising is by recommendation of our readers, and we hope they will not forget to make *The Vasculum* known among their friends and acquaintances. On page 139 will be found the first of a series of papers concerning the recent Armstrong College expedition (which was joined by a contingent from Dundee University) to Raasay and some of the neighbouring islands. It should be understood that these will by no means constitute an official report, for that will demand much careful preparation and, when complete, will of course appear elsewhere. Our purpose is to present as graphic a narrative as possible of the experiences of the members of the expedition, very kindly prepared for us by the members themselves.

Some time ago I made the assertion (*The Vasculum*, XV, 131) that the term "chesters " was applied in the later Middle Ages to all ruins of unknown history, whether they were the remains of camps or not. It did not occur to me at the time that any proof was needed, but it is suggested that I should cite an instance. I may state, therefore, that at Segden in the north-east corner of the liberties of Berwick, a monastic cell was founded about the end of the 12th century or the beginning of the 13th. Within a short time it was abandoned and fell into ruin. Later, when its history was forgotten, it became known as Segden Chesters. Reference may be made to *Scott's History of Berwick*.

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